

This Page Is Inserted by IFW Operations
and is not a part of the Official Record

BEST AVAILABLE IMAGES

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images may include (but are not limited to):

- BLACK BORDERS
- TEXT CUT OFF AT TOP, BOTTOM OR SIDES
- FADED TEXT
- ILLEGIBLE TEXT
- SKEWED/SLANTED IMAGES
- COLORED PHOTOS
- BLACK OR VERY BLACK AND WHITE DARK PHOTOS
- GRAY SCALE DOCUMENTS

IMAGES ARE BEST AVAILABLE COPY.

**As rescanning documents *will not* correct images,
please do not report the images to the
Image Problem Mailbox.**

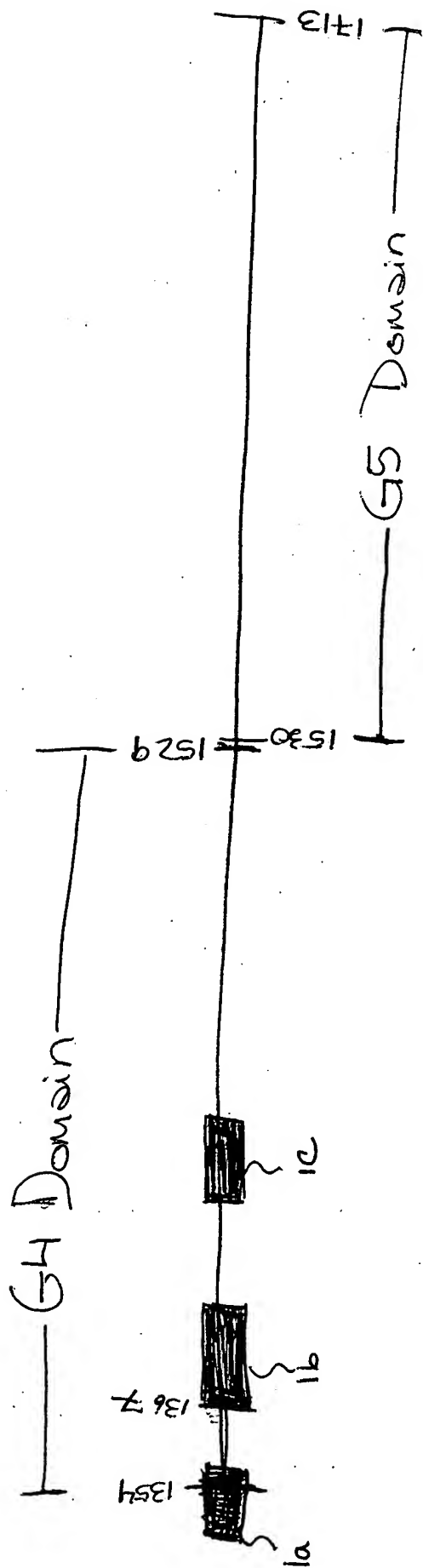


FIG. 1A

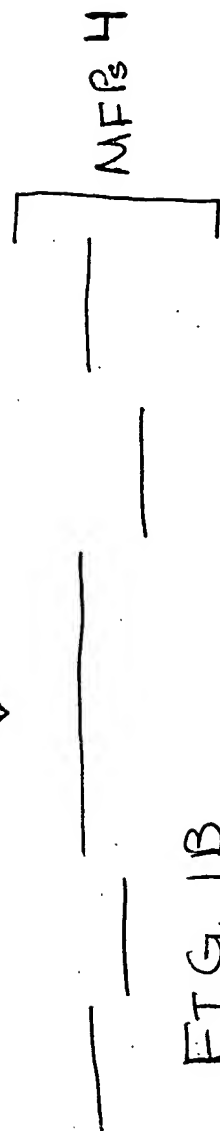
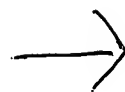
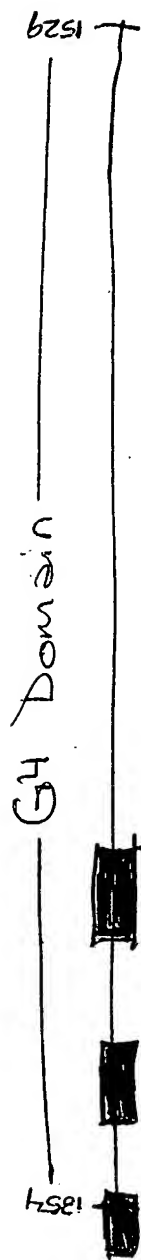


FIG. 1B

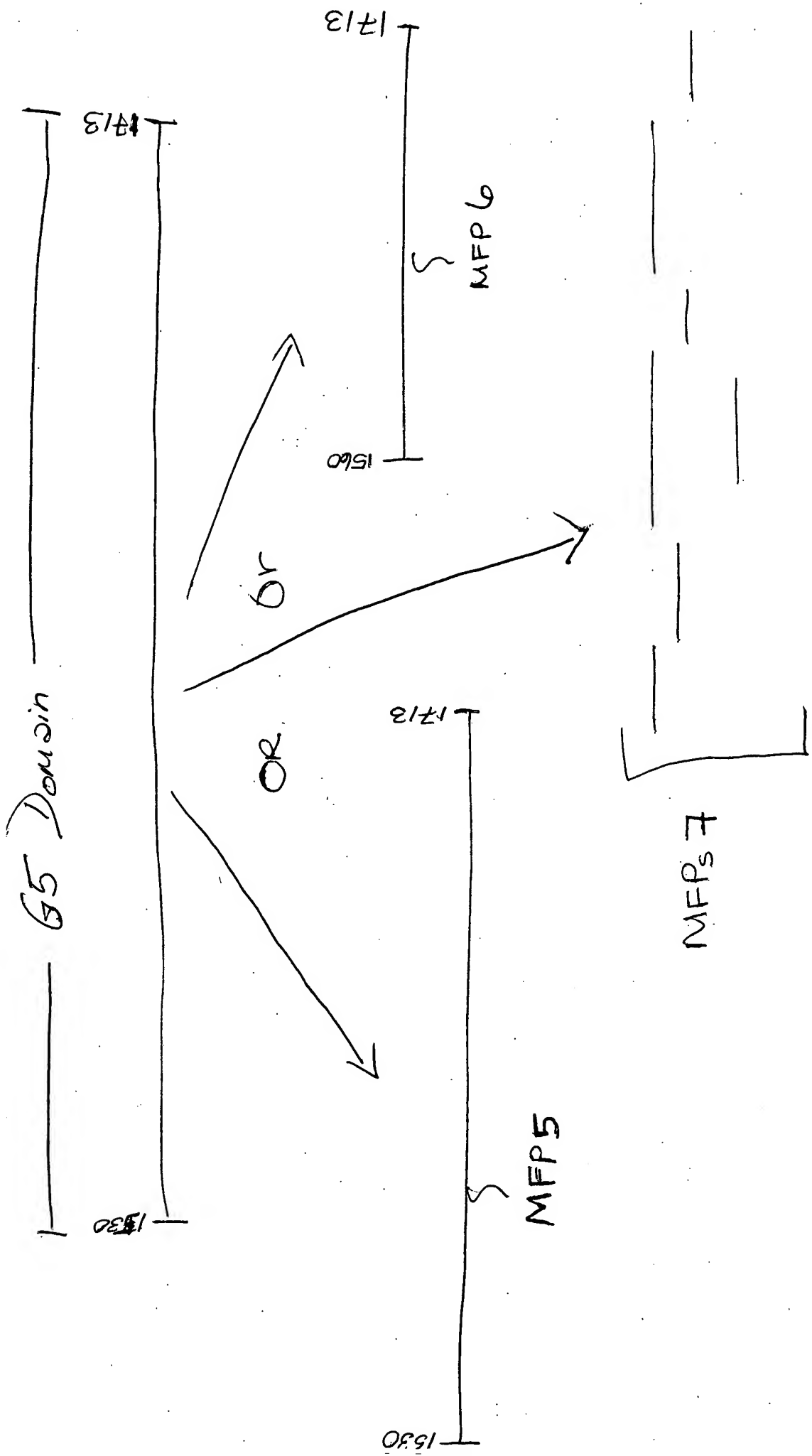


FIG. 1C

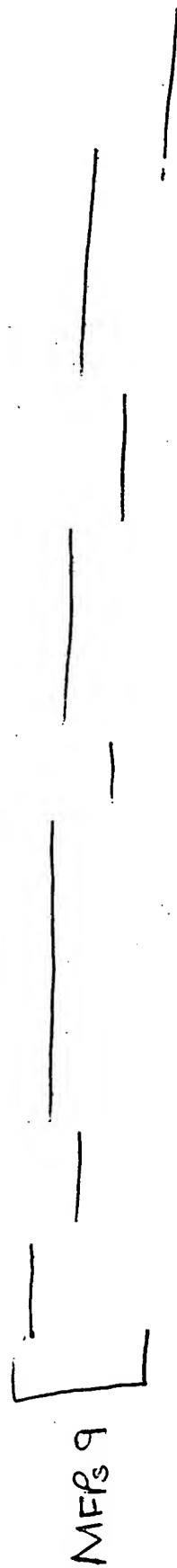
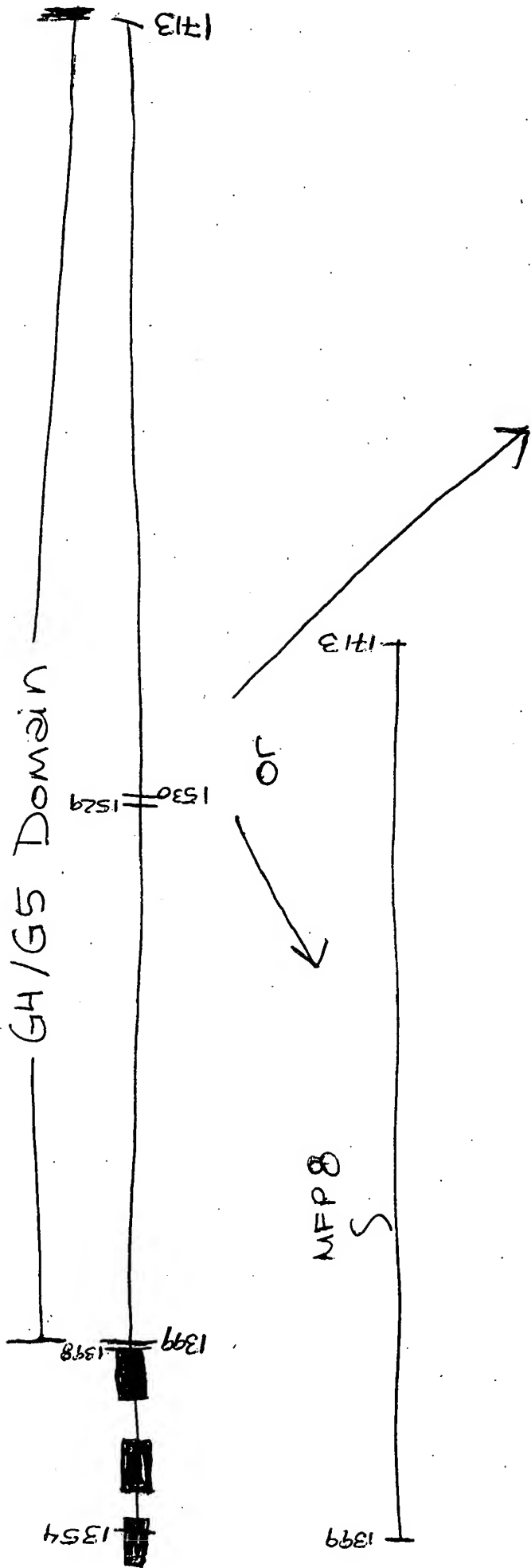


FIG 1D

FIG. 2A

1 atgggatggc tgtggatctt tggggcagcc ctggggcagt gtctgggcta
cagttcacag
61 cagcaaaggg tgccatttct tcagcctccc ggtcaaagtc aactgcaagc
gagttatgtg
121 gagtttagac ccagccaggg ttgtagccct ggatactatc gggatcataa
aggcttgtat
181 accggacggt gtgttccttg caattgcaac ggacattcaa atcaatgcca
ggatggctca
241 ggcataatgtg ttaactgtca gcacaacacc gcgggagagc actgtgaacg
ctgccaggag
301 ggctactatg gcaacgccgt ccacggatcc tgcagggcct gcccatgtcc
tcacactaac
361 agctttgcca ctggctgtgt ggtgaatggg ggagacgtgc ggtgctcctg
caaagctggg
421 tacacaggaa cacagtgtga aaggtgtgca ccgggatatt tcgggaatcc
ccagaaattc
481 ggaggtagct gccaaccatg cagttgtaac agcaatggcc agctgggcag
ctgtcatccc
541 ctgactggag actgcataaa ccaagaaccc aaagatagca gccctgcaga
agaatgtgat
601 gattgcgaca gctgtgtgat gaccctcctg aacgacctgg ccaccatggg
cgagcagctc
661 cgcttgggtca agtctcagct gcagggcctg agtgccagcg cagggcttct
ggagcagatg
721 aggcacatgg agaccaggc caaggacctg aggaatcagt tgctcaacta
ccgttctgcc
781 atttcaaadc atggatcaaa aatagaaggc ctggaaagag aactgactga
tttgaatcaa
841 gaatttgaga ctttgcaaga aaaggctcaa gtaaattcca gaaaagcaca
aacattaaac
901 aacaatgtta atcgggcaac acaaagcgca aaagaactgg atgtgaagat
taaaaatgtc
961 atccggaatg tgcacattct tttaaagcag atctctggga cagatggaga
gggaacaac
1021 gtgccttcag gtgacttttc cagagagtgg gctgaagccc agcgcatgat
gagggaactg
1081 cggaacagga actttggaaa gcacctcaga gaagcagaag ctgataaaag
ggagtcgcag
1141 ctcttgctga accggataag gacctggcag aaaaccacc agggggagaa
caatgggctt
1201 gctaacagta tccgggattc tttaaagaa tacgaagcca aactcagtga
ccttcgtgct
1261 cggctgcagg aggcagctgc ccaagccaag caggcaaag gcttgaacca
agaaaacgag

FIG. 2A (CONT)

1321 agagcttttg gagccattca gagacaagtg aaagaaataa attccctgca
gagtgatttc
1381 accaagtatc taaccactgc agactcatct ttgttgcaaa ccaacattgc
gctgcagctg
1441 atggagaaaa gccagaagga atatgaaaaa ttagctgcca gtttaaataa
agcaagacaa
1501 gaactaagtg acaaagtaag agaactttcc agatctgctg gcaaaacatc
ccttggtggag
1561 gaggcagaaa agcacgcgcg gtccttaca gagctggcaa agcagctgga
agagatcaag
1621 agaaacgcca gcggggatga gctgggtgcgc tgtgctgtgg atgccgccac
cgctacgag
1681 aacatcctca atgcatcaa agcggccgag gacgcagcca acagggtgc
cagtgcattc
1741 gaatctgccc tccagacagt gataaaggaa gatctgcca gaaaagctaa
aacctgagt
1801 tccaacagtg ataaactgtt aaatgaagcc aagatgacac aaaagaagct
aaagcaagaa
1861 gtcagtccag ctctcaacaa cctacagcaa accctgaata ttgtgacagt
tcagaaagaa
1921 gtgatagaca ccaatctcac aactctccga gatggctctc atgggatata
gagaggtgat
1981 attgatgcta tgatcagtag tgcaaagagc atggtcagaa aggccaacga
catcacagat
2041 gaggttcttg atgggtcaa ccccatccag acagatgtgg aaagaattaa
ggacacctat
2101 gggaggacac agaacgaaga cttcaaaaag gctctgactg atgcagataa
ctcgggtgaat
2161 aagttaacca acaaactacc tgatcttttg cgcaagattg aaagtatcaa
ccaacagctg
2221 ttgcccttg gaaacatctc tgacaacatg gacagaatac gagaactaat
tcagcaggcc
2281 agagatgctg ccagtaaggt tgctgtcccc atgaggttca atggtaaata
tggagtgcga
2341 gtccgactgc caaatgacct ggaagatttg aaaggatata catctctgtc
cttgtttctc
2401 caaaggccca actcaagaga aaatgggggt actgagaata tgtttgtgat
gtaccttgga
2461 aataaagatg cctcccggga ctacatcggc atggcagttg tggatggcca
gctcacctgt
2521 gtctacaacc tgggggaccg tgaggctgaa ctccaagtgg accagatctt
gaccaagagt
2581 gagactaagg aggcagttat ggatcgggtg aaatttcaga gaatttatca
gtttgcaagg

FIG. 2A (CONT)

2641 cttaattaca ccaaaggagc cacatccagt aaaccagaaa caccgaggat
 ctatgacatg
 2701 gatggtagaa atagcaatac actccttaat ttggatcctg aaaatgttgt
 attttatgtt
 2761 ggagggttacc cacctgattt taaacttccc agtcgactaa gtttccctcc
 atacaaagggt
 2821 tgtattgaat tagatgacct caatgaaaat gttctgagct tgtacaactt
 caaaaaaaca
 2881 ttcaatctca acacaactga agtggagcct tgtagaagga ggaaggaaga
 gtcagacaaa
 2941 aattattttg aaggtagggg ctatgctcga gttccaactc aaccacatgc
 tcccatccca
 3001 acctttggac agacaattca gaccaccgtg gatagaggct tgctgttctt
 tgcagaaaaac
 3061 ggggatcgct tcatatctct aaatatagaa gatggcaagc tcatggtgag
 atacaaactg
 3121 aattcagagc taccaaaaga gagaggagt ggagacgcca taaacaacgg
 cagagaccat
 3181 tcgattcaga tcaaaattgg aaaactccaa aagcgtatgt ggataaatgt
 ggacgttcaa
 3241 aacactataa ttgatggtga agtatttgat ttcagcacat attatctggg
 aggaattcca
 3301 attgcaatca gggaaagatt taacatttct acgcctgctt tccgaggctg
 catgaaaaat
 3361 ttgaagaaaa ccagtgggtg cgtagattg aatgatactg tgggagtaac
 caaaaagtgc
 3421 tcggaagact ggaagcttgt gcgatctgcc tcattctcca gaggaggaca
 attgagtttc
 3481 actgatttgg gcttaccacc tactgaccac ctccaggcct catttggatt
 tcagacctt
 3541 caaccagtg gcatattatt agatcatcag acatggacaa ggaacctgca
 ggtcactctg
 3601 gaagatggtt acattgaatt gagcaccagc gatagcggcg gcccaatttt
 taaatctcca
 3661 cagacgtata tggatggttt actgcattat gtatctgtaa taagcgacaa
 ctctggacta
 3721 cggcttctca tcgatgacca gcttctgaga aatagcaaaa ggctaaaaca
 catttcaagt
 3781 tcccggcagt ctctgcgtct gggcgggagc aattttgagg gttgtattag
 caatgttttt
 3841 gtccagaggt tatcactgag tctgaagtc ctagatttga ccagtaactc
 tctcaagaga
 3901 gatgtgtccc tgggaggctg cagtttaaac aaaccacctt ttctaattgt
 gcttaaagggt

FIG. 2A (CONT)

3961 tctaccaggt ttaacaagac caagactttt cgtatcaacc agctgttgca
 ggacacacca
 4021 gtggcctccc caaggagcgt gaagggtggt caagatgctt gctcaccact
 tcccaagacc
 4081 caggccaatc atggagccct ccagtttggg gacattccca ccagccactt
 gctattcaag
 4141 cttcctcagg agctgctgaa acccagggtca cagtttgctg tggacatgca
 gacaacatcc
 4201 tccagaggac tgggtgtttca cacggggcact aagaactcct ttatggctct
 ttatctttca
 4261 aaaggacgtc tggctctttgc actggggaca gatgggaaaa aattgaggat
 caaaagcaag
 4321 gagaaatgca atgatgggaa atggcacacg gtgggtgtttg gccatgatgg
 ggaaaagggg
 4381 cgcttggttg tggatggact gagggcccgg gaggggaagt tgccctggaaa
 ctccaccatc
 4441 agcatcagag cgccagttta cctgggatca cctccatcag ggaaaccaa
 gagcctcccc
 4501 acaaacagct ttgtgggatg cctgaagaac tttcagctgg attcaaaacc
 cttgtatacc
 4561 ccttcttcaa gcttcgggggt gtcttcctgc ttgggtgggtc ctttgagaa
 aggcatttat
 4621 ttctctgaag aaggagggtca tgcgtcttg gctcactctg tattgttggg
 gccagaattt
 4681 aagcttggtt tcagcatccg cccaagaagt ctactggga tcctaataca
 catcggaagt
 4741 cagcccggga agcacttatg tgtttacctg gaggcaggaa aggtcacggc
 ctctatggac
 4801 agtggggcag gtgggacctc aacgtcggtc acaccaaagc agtctctgtg
 tgatggacag
 4861 tggcactcgg tggcagtcac cataaaacaa cacatcctgc acctggaact
 ggacacagac
 4921 agtagctaca cagctggaca gatcccctc ccacctgcca gcaactcaaga
 gccactacac
 4981 cttggaggtg ctccagccaa tttgacgaca ctgaggatcc ctgtgtggaa
 atcattcttt
 5041 ggctgtctga ggaatattca tgtcaatcac atccctgtcc ctgtcactga
 agccttgga
 5101 gtccaggggc ctgtcagtct gaatgggtgt cctgaccagt aaccaagcc
 tatttcacag
 5161 caaggaaatt caccttcaaa agcactgatt acccaatgca cctccctccc
 cagctcgaga
 5221 tcattcttca attaggacac aaaccagaca ggtttaatag cgaatcta
 tttgaattct

FIG. 2A (CONT)

5281 gaccatggat acccatcact ttggcattca gtgctacatg tgtattttat
ataaaaaatcc

5341 catttcttga agataaaaaa attggtattc aaattggtat gcacagaatg
tttttggtaa

5401 tattaatttc cactaaaaaa ttaaattgtct ttt

FIG. 2B

MGWLWIFGAALGQCLGYSSQQQRPFLQPPGQSQLQASYVEFRP
SQGCSPGYRDKGLYTGRVCPCNCNGHSNQCQDGSIGVCNCQHNTAGEHCERCQEGY
YGNAVHGSCRACPCPHTNSFATGCVVNGGDVRCCKAGYTGTCERCAPGYFGNPQKF
GGSCQPCSCNSNGQLGSCHPLTGDCINQEPKDSSPAEECDDCDSCVMTLLNDLATMGE
QLRLVKSQLQGLSASAGLLEQMRHMETQAKDLRNQLLNYSASINHGSKI EGLERELT
DLNQEFETLQEKAVNSRKAQTLNNNVNRATQSAKELDVKIKNVIRNVHILLKQISGT
DGEENNVPSGDFSREWAEQRMRELNRNRFNGKHLREAEADKRESQLLNRI RTWQKT
HQGENNGLANSIRDSLNEYEAKLSDLRLRLQEAQAQKQANGLNQENERALGAIQRQV
KEINSLQSDFTKYLTTADSSLLQTNIALQLMEKSQKEYEKLAA SLNEARQELSDKVRE
LSRSAGKTSLVEEAEKHARSLQELAKQLEEIKRNASGDELVRCAVDAATAYENILNAI
KAAEDAANRAASASESALQTVIKEDLPRKAKTLSSNSDKLLNEAKMTQKKLKQEVSPA
LNNLQQTLNIVTVQKEVIDTNLTTLRDGLHGIQRGDIDAMISSAKSMVRKANDITDEV
LDGLNPIQTDVERIKDTYGR TQNEDEFKKALTDADNSVNKLTNKL PDLWRKIESINQQL
LPLGNISDNMDRIRELIQQARDAASKVAVPMRFNGKSGVEVRLPNDLEDLKG YTSLSL
FLQRPNSRENGGTENMFV MYLGNKDASRDYIGMAVVDGQLTCVYNLGDREAELQVDQI
LTKSETKEAVMDRVKFQRIYQFARLNYTKGATSSKPETPGVYDMDGRNSNTLLNLDPE
NVVFYVGGYPPDFKLPSRLSFPPYKGCIELDDL NENVLSLYNFKKTFNLNTTEVEPCR
RRKEESDKNYFEGTGYARVPTQPHAPIPTFGQTIQT TVDRGLLFFAENGDRFISLNIE
DGKLMVRYKLNSELPKERGVGDAINNGRDHSIQIKIGKLQKRMWINVDVQNTIIDGEV

FIG. 2B (CONT)

FDFSTYYLGGIPIAIRERFNISTPAFRGCMKNLKKTSGVVRLNDTVGVTKKCEDWKL
VRSASFSRGGQLSFTDLGLPPTDHLQASFGFQTFQPSGILLDHQWTRNLQVTLEDGY
IELSTSDSGGPIFKSPQTYMDGLLHYVSVISDNGLRLLIDDQLLRNSKRLKHISSSR
QSLRLGGSNFEGCISNVFVQRLSLSPPEVLDLTSNSLKRDVSLGGCSLNKPPFLMLLK
STRFNKTKTFRINQLLQDTPVASPRSVKVMQDACSLPKTQANHGALQFGDIPTSHLL
FKLPQELLKPRSQFAVDMQTTSSRGLVFHTGTKNSEFMALYLSKGRLVFALGTDGKKLR
IKSKEKCNDGKWHTVVFGHDGEKGRLLVVDGLRAREGSLPGNSTISIRAPVYLGSPPSG
KPKSLPTNSFVGCLKNFQLDSKPLYTPSSSFVSSCLGGPLEKGIYFSEEGGHVVLAH
SVLLGPEFKLVFSIRPRSLTGILIHIGSQPGKHLCVYLEAGKVTASMDSGAGGTSTSV
TPKQSLCDGQWHSVAVTIKQHILHLELDTDSSYTAGQIPFPASTQEPLHLGGAPANL
TTLRIPVWKSFFGCLRNIHVNHIPVPVTEALEVQGPVSLNGCPDQ

FIG. 2C

1 gcaggtccgg gaggcgcagg cggagagcgg cgggtccccc
gagccccctct gcggacggct
61 caggcgggag gaccccgccg ggctggatgg cggcggccgc gcggcctcgg
ggtcggggcac
121 tggggccagt actgccgccg acgccgctgc tcctgctggt actgcgggtg
ctgccagcct
181 gcggggcgac cgctcgggat cccggggccg cggccgggct cagccttcac
ccgacttact
241 tcaacctggc cgaggcggcg aggatttggg ccaccgccac ctgcggggag
aggggacccg
301 gcgaggggag gccccagccc gagctctact gcaagttggt cgggggcccc
accgccccag
361 gcagcggcca caccatccag ggccagttct gtgactattg caattctgaa
gacccagga
421 aagcacatcc tgtcaccaat gccatcgatg gatctgaacg ttggtggcaa
agccctcccc
481 tgtcctcagg cacacagtac aacagagtca acctcacctt ggatctgggg
cagctcttcc

FIG. 2C (CONT)

541 atgtggccta tattttaatc aaatttgcaa attctcctcg cctgatctt
tgggtcttgg
601 aaagatctgt agactttgga agcacctact caccatggca atattttgct
cattctaaag
661 tagactgttt aaaagaattt gggcgggagg caaatatggc tgtcaccggg
gatgatgatg
721 tacttttgtgt tactgaatat tcccgtattg tacctttgga aaatggtgag
gttgtggtgt
781 ccttgataaa cggtcgtcca ggtgcaaaaa attttacttt ctctcacacc
ctgagggagt
841 ttaccaaggc aacaaacatc cgcttgcggt ttcttagaac caatacgctt
cttggacacc
901 tcatctccaa agcccagcga gatccaactg tcaactcggcg gtattattac
agcataaagg
961 acatcagcat tgggtgggcag tgtgtttgca atggccatgc tgaagtgtgc
aatataaaca
1021 atcctgaaaa actgtttcgg tgtgaatgcc agcaccacac ctgtggggag
acgtgtgatc
1081 gctgctgcac aggggtacaat cagaggcgct ggcggcccg cgttggggag
cagagccacg
1141 agtgtgaagc atgcaactgc cacggccatg ccagcaactg ttactatgat
ccagatgttg
1201 agcggcagca ggcaagcttg aatacccagg gcatctatgc tgggtggaggg
gtctgcatta
1261 actgtcagca caacacagct ggagtaaact gtgaacagtg tgctaagggc
tattaccgcc
1321 cttatgggggt tccagtggat gcccctgatg gctgcatccc ctgcagctgt
gaccctgagc
1381 atgcggatgg ctgtgaacag ggttcaggcc gctgtcactg caagccaaat
ttccacggag
1441 acaactgtga gaagtgtgca attggatact acaatttccc attttgcttg
agaattccca
1501 tttttcctgt ttctacacca agttcagaag atccagtagc tggagatata
aaaggggtgtg
1561 actgtaatct ggaagggtgt ctccctgaaa tatgtgatgc ccacggacgg
tgctgtgcc
1621 gccctgggggt tgagggccct cgatgtgata cctgccgctc tggtttctac
tcattcccta
1681 tttgccaagc ctgctggtgt tcagcccttg gatcctacca gatgccctgc
agctcagtga
1741 ctggacagtg tgaatgtcgg ccaggagtta caggacagcg gtgtgacagg
tgtctctcag
1801 gagcttatga tttccccac tgccaagggt ccagcagtgc ttgtgacca
gctggtacca

FIG. 2C (CONT)

1861 tcaactccaa tttggggtat tgccaatgca agcttcatgt tgaaggctct
 acttgtagcc
 1921 gctgcaaact gttatattgg aatctggaca aagaaaaccc cagtggatgt
 tcagaatgca
 1981 agtgccataa ggcgggaaca gtgagtggaa ctggagagtg taggcagga
 gatggtgact
 2041 gtcactgcaa gtcccatgtg ggtggcgatt cctgcgacac ctgtgaagat
 ggatattttg
 2101 ctttggaana gagcaattac tttgggtgtc aagggtgtca gtgtgacatt
 ggtggggcat
 2161 tgtcctccat gtgcagtggg cctcgggag tgtgccagtg ccgagagcat
 gtcgtgggaa
 2221 aggtgtgcca gcggcctgaa acaactact atttcccaga tttgcatcat
 atgaagtatg
 2281 agattgaaga cggcagcaca cctaattgga gagaccttcg atttggattt
 gatccgctgg
 2341 catttctga gtttagctgg agaggatatg cccaaatgac ctgagtacag
 aatgatgtaa
 2401 gaataacatt gaatgtaggg aagtcaagtg gtccttgtt tctgtttatt
 ctgagatacg
 2461 ttaaccctgg aactgaagca gtatctggcc atataactat ttatccatcc
 tggggtgctg
 2521 ctcaaagcaa agagatcatc ttctgcca gtaaggagcc agcctttgtc
 actgtccctg
 2581 gaaatgggtt tgcagacca ttttcaatca caccaggaat atgggttgct
 tgtattaagg
 2641 cagaaggagt ccttctggat tacctggtgc tgctccccag ggactactat
 gaagcctctg
 2701 tactgcagct gccagtcaca gaaccatgtg cctacgcagg acctcccaa
 gaaaattgct
 2761 tactctacca gcatttgcca gtgaccagat tcccctgtac cctggcttgt
 gaggccagac
 2821 acttctgct tgatggggag ccaagaccg tggcagtgag gcagcccaca
 cctgcacacc
 2881 ctgtcatggt ggacctcagc gggagagagg tggaattgca tctgcggctg
 cgcacccac
 2941 aggttggcca ctacgtggtt gtggtcagat attccacgga ggcagctcag
 ctgtttgtg
 3001 ttgatgtgaa tgtgaagagc tccgggtctg ttctggcagg ccaggtgaac
 atttacagct
 3061 gcaactacag tgttctctgc cggagtgtg tgattgatca catgagccgc
 atcgccatgt
 3121 atgagctatt ggcagatgca gacattcagc tcaagggaca catggccoga
 ttccttctgc

FIG. 2C (CONT)

3181 atcaagtttg tatcatacct attgaagaat tctcagctga gtatgtgaga
 ccacaagtcc
 3241 actgcattgc cagttatggg cgatttgtca atcaaagtgc cacctgtgtc
 tccttggccc
 3301 atgaaactcc tccaacagca ttaattttgg atgttctaag tggcaggcct
 ttccctcacc
 3361 tgccccagca gtcgtcacct tctgttgatg ttcttcttgg ggtcaccttg
 aaggcaccgc
 3421 agaatcaagt gaccctgaga ggacgtgtac cacacctggg ccgatacgtc
 tttgtcatcc
 3481 attttttacca agcagcgcac ccgacgtttc ccgcgaggt gtccgtggat
 ggcggggtggc
 3541 cacgggcagg ctcttccat gcctcttttt gccccatgt gcttggctgc
 cgggatcaag
 3601 tgattgccga aggccagatt gagtttgaca tctcagagcc tgaagtggcc
 gcaactgtga
 3661 aggttccaga aggaaagtcc ttggttttgg tccgtgttct agtgggtgcct
 gcagaaaact
 3721 atgactacca aatacttcac aaaaaatcca tggacaagtc actcgagttt
 atcaccaatt
 3781 gtggaaaaaa cagcttttac cttgaccccc agacagcctc cagattctgt
 aagaattccg
 3841 ccagggtccct ggtggccttt taccacaagg gcgccttgcc ttgtgagtgc
 caccctactg
 3901 gggccaccgg ccctcactgc agccctgagg gtgggcagtg cccatgccag
 cccaacgtca
 3961 tcgggcggca gtgcaccgc tgtgcaacag gccactacgg attcccacgc
 tgcaagccgt
 4021 gcagctgtgg tcggcgctt tgtgaagaga tgacggggca gtgccgctgc
 cctccccgca
 4081 cggtcaggcc ccagtgtgag gtgtgtgaga cacactcatt cagcttcac
 cccatggccg
 4141 gctgcgaagg ctgcaactgt tccaggaggg gcaccatcga ggctgccatg
 ccggagtgtg
 4201 accgggacag cgggcagtgc agatgcaagc ccagaatcac agggcggcag
 tgtgaccgat
 4261 gtgcttcgg gttttaccgc tttcctgagt gtgttcctg caattgcaac
 agagatggga
 4321 ctgagccagg agtgtgtgac ccagggaccg gggcttgctt ctgcaaggaa
 aatgtagaag
 4381 gcacagagt taatgtgtgt cgagaaggct cattccattt ggaccagcc
 aatctcaagg
 4441 gttgtaccag ctgtttctgt tttggagtaa ataataatg tcacagctca
 cataagcgaa

FIG. 2C (CONT)

4501 ggactaagtt tgtggatatg ctgggctggc acctggagac agcagacaga
gtggacatcc
4561 ctgtctcttt caaccacaggc agcaacagta tgggtggcggg tctccaggag
ctgcccgcga
4621 ccatccacag cgcgtcctgg gtcgcaccca cctcctaact gggggacaag
gtttcttcat
4681 atggtgggta cctcacttac caagccaagt cctttggctt gcctggcgac
atggttcttc
4741 tggaaaagaa gccggatgta cagctcactg gtcagcacat gtccatcatc
tatgaggaga
4801 caaacacccc acggccagac cggctgcatac atggacgagt gcacgtggtc
gagggaact
4861 tcagacatgc cagcagccgt gccccagtgt ctaggaggga gctgatgaca
gtgctgtcta
4921 gactggcaga tgtgcgcatac caaggcctct acttcacaga gactcaaagg
ctcaccctga
4981 gcgaggtggg gctagaggaa gcctctgaca caggaagtgg gcgcatagca
cttgctgtgg
5041 aaatctgtgc ctgccccctt gcctacgctg gtgactcttg tcagggttgt
agccctggat
5101 actatcgga tcataaaggc ttgtataccg gacggtgtgt tccttgcaat
tgcaacggac
5161 attcaaatca atgccaggat ggctcaggca tatgtgttaa ctgtcagcac
aacaccgcg
5221 gagagcactg tgaacgctgc caggagggct actatggcaa cgcgctccac
ggatcctgca
5281 gggcctgccc atgtcctcac actaacagct ttgccactgg ctgtgtgggtg
aatgggggag
5341 acgtgcggtg ctcttgcaaa gctgggtaca caggaacaca gtgtgaaagg
tgtgcaccgg
5401 gatatttcgg gaatccccag aaattcggag gtagctgcca accatgcagt
tgtaacagca
5461 atggccagct gggcagctgt catcccctga ctggagactg cataaaccaa
gaacccaaag
5521 atagcagccc tgcagaagaa tgtgatgatt gcgacagctg tgtgatgacc
ctcctgaacg
5581 acctggccac catgggcgag cagctccgcc tgggtcaagtc tcagctgcag
ggcctgagtg
5641 ccagcgcagg gcttctggag cagatgaggc acatggagac ccaggccaag
gacctgagga
5701 atcagttgct caactaccgt tctgccattt caaatcatgg atcaaaaata
gaaggcctgg
5761 aaagagaact gactgatttg aatcaagaat ttgagacttt gcaagaaaag
gctcaagtaa

FIG. 2C (CONT)

5821 attccagaaa agcacaaaca ttaaacaaca atgttaatcg ggcaacacaa
 agcgcaaaaag
 5881 aactggatgt gaagattaaa aatgtcatcc ggaatgtgca cattctttta
 aagcagatct
 5941 ctgggacaga tggagaggga aacaacgtgc cttcaggtga cttttccaga
 gagtgggctg
 6001 aagcccagcg catgatgagg gaactgcgga acaggaactt tggaaagcac
 ctccagagaag
 6061 cagaagctga taaaaggagag tcgcagctct tgctgaaccg gataaggacc
 tggcagaaaa
 6121 cccaccaggg ggagaacaat gggcttgcta acagtatccg ggattcttta
 aatgaatacg
 6181 aagccaaact cagtgcacctt cgtgctcggc tgcaggaggc agctgcccaa
 gccaaagcag
 6241 caaatggctt gaaccaagaa aacgagagag ctttgggagc cattcagaga
 caagtgaag
 6301 aaataaattc cctgcagagt gatttcacca agtatctaac cactgcagac
 tcatctttgt
 6361 tgcaaacc aa cattgcgctg cagctgatgg agaaaagcca gaaggaatat
 gaaaaattag
 6421 ctgccagttt aaatgaagca agacaagaac taagtgacaa agtaagagaa
 ctttccagat
 6481 ctgctggcaa aacatccctt gtggaggagg cagaaaagca cgcgcggtcc
 ttacaagagc
 6541 tggcaaagca gctggaagag atcaagagaa acgccagcgg ggatgagctg
 gtgcgctgtg
 6601 ctgtggatgc cgccaccgcc tacgagaaca tcctcaatgc catcaaagcg
 gccgaggagc
 6661 cagccaacag ggctgccagt gcatctgaat ctgccctcca gacagtgata
 aaggaagatc
 6721 tgccaagaaa agctaaaacc ctgagttcca acagtgataa actgttaa
 gaagccaaga
 6781 tgacacaaaa gaagctaaag caagaagtca gtccagctct caacaaccta
 cagcaaacc
 6841 tgaatattgt gacagttcag aaagaagtga tagacaccaa tctcacaact
 ctccgagatg
 6901 gtcttcatgg gatacagaga ggtgatattg atgctatgat cagtagtgca
 aagagcatgg
 6961 tcagaaaggc caacgacatc acagatgagg ttctggatgg gctcaacccc
 atccagacag
 7021 atgtggaaag aattaaggac acctatggga ggacacagaa cgaagacttc
 aaaaaggctc
 7081 tgactgatgc agataactcg gtgaataagt taaccaacaa actacctgat
 ctttggcgca

FIG. 2C (CONT)

7141 agattgaaag tatcaaccaa cagctgttgc ccttgggaaa catctctgac
aacatggaca
7201 gaatacgaga actaattcag caggccagag atgctgccag taaggttgct
gtcccatga
7261 ggttcaatgg taaatctgga gtcgaagtcc gactgccaaa tgacctggaa
gatttgaag
7321 gatatacatc tctgtccttg tttctccaaa ggcccaactc aagagaaaat
gggggtactg
7381 agaatatgtt tgtgatgtac cttggaaata aagatgcctc ccgggactac
atcggcatgg
7441 cagttgtgga tggccagctc acctgtgtct acaacctggg ggacctgag
gctgaactcc
7501 aagtggacca gatcttgacc aagagtgaga ctaaggaggc agttatggat
cgggtgaaat
7561 ttcagagaat ttatcagttt gcaaggctta attacaccaa aggagccaca
tccagtaaac
7621 cagaaacacc cggagtctat gacatggatg gtagaaatag caatacactc
cttaatttgg
7681 atcctgaaaa tgttgtattt tatgttggag gttaccacc tgattttaaa
cttcccagtc
7741 gactaagttt cctccatac aaagggtgta ttgaattaga tgacctcaat
gaaaatgttc
7801 tgagcttgta caacttcaaa aaaacattca atctcaacac aactgaagtg
gagccttgta
7861 gaaggaggaa ggaagagtca gacaaaaatt attttgaagg tacgggctat
gctcgagttc
7921 caactcaacc acatgctccc atcccaacct ttggacagac aattcagacc
accgtggata
7981 gaggcttgct gttctttgca gaaaacgggg atcgcttcat atctctaaat
atagaagatg
8041 gcaagctcat ggtgagatac aaactgaatt cagagctacc aaaagagaga
ggagttggag
8101 acgccataaa caacggcaga gaccattcga ttcagatcaa aattggaaaa
ctccaaaagc
8161 gtatgtggat aaatgtggac gttcaaaaca ctataattga tggatgaagta
tttgatttca
8221 gcacatatta tctgggagga attccaattg caatcaggga aagatttaac
atttctacgc
8281 ctgctttccg aggctgcatg aaaaatttga agaaaaccag tgggtgcgtt
agattgaatg
8341 atactgtggg agtaaccaa aagtgctcgg aagactggaa gcttgtgcga
tctgcctcat
8401 tctccagagg aggacaattg agtttactg atttgggctt accacctact
gaccacctcc

FIG. 2C (CONT)

8461 aggcctcatt tggatttcag acctttcaac ccagtggcat attattagat
 catcagacat
 8521 ggacaaggaa cctgcaggtc actctggaag atggttacat tgaattgagc
 accagcgata
 8581 gcggcagccc aattttttaa tctccacaga cgtatatgga tggtttactg
 cattatgtat
 8641 ctgtaataag cgacaactct ggactacggc ttctcatcga tgaccagctt
 ctgagaaata
 8701 gcaaaaggct aaaacacatt tcaagttccc ggcagtctct gcgtctgggc
 gggagcaatt
 8761 ttgaggggtg tattagcaat gtttttgtcc agaggttatc actgagtcct
 gaagtcctag
 8821 atttgaccag taactctctc aagagagatg tgtccctggg aggctgcagt
 ttaaacaac
 8881 caccttttct aatgttgctt aaaggttcta ccaggtttaa caagaccaag
 acttttcgta
 8941 tcaaccagct gttgcaggac acaccagtgg cctccccaag gagcgtgaag
 gtgtggcaag
 9001 atgcttgctc accacttccc aagaccagg ccaatcatgg agccctccag
 tttggggaca
 9061 ttcccaccag ccacttgcta ttcaagcttc ctcaggagct gctgaaaccc
 aggtcacagt
 9121 ttgctgtgga catgcagaca acatcctcca gaggactggg gtttcacacg
 ggcactaaga
 9181 actcctttat ggctctttat ctttcaaaag gacgtctggg ctttgcaactg
 gggacagatg
 9241 ggaaaaaatt gaggatcaaa agcaaggaga aatgcaatga tgggaaatgg
 cacacggtgg
 9301 tgtttggcca tgatggggaa aaggggcgct tggttgtgga tggactgagg
 gcccgagg
 9361 gaagtttgcc tggaaactcc accatcagca tcagagcgcc agtttacctg
 ggatcacctc
 9421 catcaggga accaaagagc ctccccacaa acagctttgt gggatgcctg
 aagaactttc
 9481 agctggattc aaaacccttg tatacccctt cttcaagctt cggggtgtct
 tcctgcttg
 9541 gtggtccttt ggagaaaggc atttatttct ctgaagaagg aggtcatgtc
 gtcttggtc
 9601 actctgtatt gttggggcca gaatttaagc ttgttttcag catccgcca
 agaagtctca
 9661 ctgggatcct aatacacatc ggaagtcagc ccgggaagca cttatgtgtt
 tacctggagg
 9721 caggaaaggc cacggcctct atggacagtg gggcagggtg gacctcaacg
 tcggtcacac

FIG. 2C (CONT)

9781 caaagcagtc tctgtgtgat ggacagtggc actcgggtggc agtcaccata
aaacaacaca
9841 tcctgcacct ggaactggac acagacagta gctacacagc tggacagatc
cccttccac
9901 ctgccagcac tcaagagcca ctacaccttg gaggtgctcc agccaatttg
acgacactga
9961 ggatccctgt gtggaaatca ttctttggct gtctgaggaa tattcatgtc
aatcacatcc
10021 ctgtccctgt cactgaagcc ttggaagtcc aggggcctgt cagtctgaat
ggttgtcctg
10081 accagtaacc caagcctatt tcacagcaag gaaattcacc ttcaaaagca
ctgattacc
10141 aatgcacctc cctccccagc tcgagatcat tcttcactca ggacacaaac
cagacaggtt
10201 taatagcgaa tctaattttg aattctgacc atggataccc atcactttgg
cattcagtgc
10261 tacatgtgta ttttatataa aaatcccatt tcttgaagat aaaaaaattg
ttattcaaat
10321 tgttatgcac agaatgtttt tggtaatatt aatttccact aaaaaattaa
atgtctttta
10381 agaaacattc ttttccactt gttaaaaaaa ttaaatatat tttaaagcac
tttaagaata
10441 tgaaactttc atatatgtta aaggattata atttatggaa ttaaaaaatg
cagtgtagtc
10501 cttaaaaaaa a

FIG. 2D

MAAAARPRGRALGPVLPPTPLLLLVLRLVLPACGATARDPGAAAG
LSLHPTYFNLAEAAARIWATATCGERGPGEGRPQPELYCKLVGGPTAPGSGHTIQGQFC
DYCNSEDPRKAHPVTNAIDGSERWWQSPPLSSGTQYNRVNLTLDLGQLFHVAYILIKF
ANSRPDLWVLERSVDFGSTYSPWQYFAHSKVDCLKEFGREANMAVTRDDDVLCVTEY
SRIVPLENGEVVVSLINGRPGAKNFTFSHTLREFTKATNIRLRFLRTNTLLGHLISKA
QRDPTVTRRYYSIKDISIGGQVCNGHAEVCNINNPEKLFRCCEQHHTCGETCDRCC
TGYNQRRWRPAAWEQSHECEACNCHGHASNCYYDPDVERQQASLNTQGIYAGGGVCIN
CQHNTAGVNCEQCAKGYRPHYGVVDAPDGCIPCSCDPEHADGCEQSGRCHCKPNFH

FIG. 2D (CONT)

GDNCEKCAIGYYNFPFCLRIPIFPVSTPSSDPVAGDIKGCDNLEGLVPEICDAHGR
CLCRPGVEGPRCDTCSRGSFYSPICQACWCSALGSYQMPCCSVTGQCECRPGVTGQRC
DRCLSGAYDFPHCQGSSSACDPAGTINSNLGYCQCKLHVEGPTCSRCKLLYWNLDKEN
PSGCSECKCHKAGTVSGTGECRQGDGDCHCKSHVGGDSCDTCEDGYFALEKSNYFGCQ
GCQCDIGGALSSMCSGPGSGVCQCREHVVGKVCQRPENNYFFDLHHMKYEIEDGSTPN
GRDLRFGFDPLAFPEFSWRGYAQMTSVQNDVRITLNVGKSSGSLFRVILRYVNPGETA
VSGHITIYPSWGAAQSKEIIFLPSKEPAFVTVPGNGFADPFSITPGIWWACIKAEGVL
LDYLVLLPRDYYEASVLQLPVTEPCAYAGPPQENCLLYQHLPVTRFPCTLACEARHFL
LDGEPRPVAVRQPTPAHPVMVDLSGREVELHLRLRIPQVGHYVVVVEYSTAAQLFVV
DVNVKSSGSLAGQVNIYSCNYSVLCRSAVIDHMSRIAMYELLADADIQLKGHMARFL
LHQVCIIPIEEFSAEYVRPQVHCIASYGRFVNQSATCVSLAHETPPTALILDVLSGRP
FPHLPQQSSPSVDVLPGVTLKAPQNQVTLRGRVPHLGRYVFVIHFYQAAHPTFPAQVS
VDGGWPRAGSFHASFCPHVLGCRDQVIAEGQIEFDISEPEVAATVKVPEGKSLVLVRV
LVVPAENYDYQILHKKSMDSLEFITTNGKNSFYLDPQTASRFCKNSARSLVAFYHKG
ALPCECHPTGATGPHCSPEGGQCPCQPNVIGRQCTRCATGHYGFPRCKPCSCGRRLLCE
EMTGQCRCPPRTVRPQCEVCETHSFSFHPMAGCEGCNCSRRGTIEAAMPECDRDSGQC
RCKPRITGRQCDRCASGFYRFPECVPCNCNRDGTPEGVCDPGTGACLCKENVEGTECN
VCREGSFHLDPANLKGCTSCFCFGVNNQCHSSHKRRTKFVDMLGWHLETADRVDIPVS
FNPGSNSMVADLQELPATIHSASWVAPTSYLGDKVSSYGGYLTQAKSFGLPGDMVLL
EKKPDVQLTGQHMSIIYEETNTPRPDLHHGRVHVVEGNFRHASSRAPVSREELMTVL
SRLADVRIQGLYFTETQRLTLSEVGLLEEASDTGSGRIALAVEICACPPAYAGDSCQGC
SPGYRDHKGLYTGRVCPCNCNGHSNQCQDGSIGVNCQHNTAGEHCERCQEGYYGNA

FIG. 2D (CONT)

VHGSCRACPCPHTNSFATGCVVNGGDVRCSCKAGYTGTQCERCAPGYFGNPQKFGGSC
QPCSCNSNGQLGSCHPLTGDCINQEPKDSSPAEECDDCDSCVMTLLNDLATMGEQLRL
VKSQLOGLSASAGLLEQMRHMETQAKDLRNQLLNYSASINHGSKIIEGLERELTDLNQ
EFETLQEKAAQVNSRKAQTLNNNVNRATQSAKELDVKIKNVIRNVHILLKQISGTDGEG
NNVPSGDFSREWAEAQRMMRELNRNFGKHLREAEADKRESQLLLNRI RTWQKTHQGE
NNGLANSI RDSLNEYEAKLSDLRARLQEAAAQAKQANGLNQENERALGAIQRQVKEIN
SLQSDFTKYLT TADSSLLQTNIALQLMEKSQKEYEKLAASLNEARQELSDKVRELSRS
AGKTSLVEEAEKHARSLQELAKQLEEI KRNASGDELVRCAVDAATAYENILNAIKAAE
DAANRAASASESALQTVIKEDLPRKAKTLSSNSDKLLNEAKMTQKKLKQEVSPALNNL
QQTLNIVTVQKEVIDTNLTTLRDGLHGIQRGDIDAMISSAKSMVRKANDITDEVLDGL
NPIQTDVERIKDTYGR TQNEDFKKALTDADNSVNKL TNKLPDLWRKIESINQQLPLG
NISDNMDRI RELIQQARDAASKVAVPMRFNGKSGVEVRLPNDLEDLKGYTSLSLFLQR
PNSRENGGTENMFV MYLGNKDASRDYIGMAVVDGQLTCVYNLGDREAELQVDQILTKS
ETKEAVMDRVKFQRIYQFARLNYTKGATSSKPETPGVYDMDGRNSNTLLNLDPENVVF
YVGGYPPDFKLPSRLSFPPYKGCIELDDL NENVLSLYNFKKT FNLNTTEVEPCRRRKE
ESDKNYFEGTGYARVPTQPHAPIPTFGQTIQTTVDRGLLFFAENGDRFISLNIEDGKL
MVR YKLNSELPKERGVGDAINNGRDHSIQIKIGKLQKRMWINVDVQNTIIDGEVDFDS
TYYLGGIPIAIRERFNISTPAFRGCMKNLKKTS GVVRLNDTVGVTKKCS EDWKLVRSA
SFSRGGQLSFTDLGLPPTDHLQASFGFQTFQPSGILLDHQ TWTRNLQVTLEDGYIELS
TSDSGSPIFKSPQTYMDG LLHYVSVISDNSGLRLLIDDQLLRNSKRLKHIS SSRQSLR
LGGSNFEGCISNVFVQRLSLSPEVLDLTSNSLKR DVS LGGCSLNKPPFLMLLKGSTRF
NKTKTFRINQLLQDTPVASPRSVK VWQDAC SPLPKTQANH GALQFGDIPTSHLLFKLP

FIG. 2D (CONT)

QELLKPRSQFAVDMQTTSSRGLVFHTGTKNSFMALYLSKGRLVFALGTDGKKLRIKSK
EKCNDGKWHTVVFGHDGEKGRLVVDGLRAREGSLPGNSTISIRAPVYLGSPPSGKPKS
LPTNSFVGCLKNFQLDSKPLYTPSSSFGVSSCLGGPLEKGIYFSEEGGHVVLHHSVLL
GPEFKLVFSIRPRSLTGILIHIGSQPGKHL CVYLEAGKVTASMDSGAGGTSTSVTPKQ
SLCDGQWHSVAVTIKQHILHLELDTSSYTAGQIPFPFASTQEPLHLGGAPANLTTLR
IPVWKSFFGCLRNIHVNHIPVPVTEALEVQGPVSLNGCPDQ"

FIG. 2E

1 gggatgcctc cagcagtgag gcggtcagcc tgcagcatgg gatggctgtg
gatctttggg
61 gcagccctgg ggcagtgtct gggctacagt tcacagcagc aaagggtgcc
atttcttcag
121 cctcccggtc aaagtcaact gcaagcgagt tatgtggagt ttagaccag
ccagggttgt
181 agccctggat actatcgga tcataaaggc ttgtataccg gacggtgtgt
tccctgcaat
241 tgcaacggac attcaaata atgccaggat ggctcaggca tatgtgttaa
ctgtcagcac
301 aacaccgcgg gagagcactg tgaacgctgc caggagggct actatggcaa
cgccgtccac
361 ggatcctgca gggcctgccc atgtcctcac actaacagct ttgccactgg
ctgtgtgggtg
421 aatgggggag acgtgcgggtg ctctgcaaa gctgggtaca caggaacaca
gtgtgaaagg
481 tgtgcaccgg gatatttcgg gaatccccag aaattcggag gtagctgcca
accatgcagt
541 tgtaacagca atggccagct gggcagctgt catcccctga ctggagactg
cataaaccac
601 gaacccaaag atagcagccc tgcagaagaa tgtgatgatt ggcacagctg
tgtgatgacc
661 ctctgaacg acctggccac catgggagag cagctccgcc tgggtcaagtc
tcagctgcag
721 ggcctgagtg ccagcgcagg gcttctggag cagatgaggc acatggagac
ccaggccaag
781 gacctgagga atcagttgct caactaccgt tctgccattt caaatcatgg
atcaaaaata

FIG. 2E (CONT)

841 gaaggcctgg aaagagaact gactgatttg aatcaagaat ttgagacttt
gcaagaaaag
901 gctcaagtaa attccagaaa agcacaacaa ttaaacaaca atgttaatcg
ggcaacacaa
961 agcgcaaaaag aactggatgt gaagattaaa aatgtcatcc ggaatgtgca
cattctttta
1021 aagcagatct ctgggacaga tggagagggga aacaacgtgc cttcaggtga
cttttccaga
1081 gagtgggctg aagcccagcg catgatgagg gaactgcgga acaggaactt
tggaagcac
1141 ctgagagaag cagaagctga taaaagggag tgcgagctct tgctgaaccg
gataaggacc
1201 tggcagaaaa cccaccaggg ggagaacaat gggcttgcta acagtatccg
ggattcttta
1261 aatgaatagc aagccaaact cagtgacctt cgtgctcggc tgcaggaggc
agctgccaa
1321 gccaagcagg caaatggctt gaaccaagaa aacgagagag ctttgggagc
cattcagaga
1381 caagtgaaag aaataaattc cctgcagagt gatttcacca agtatctaac
cactgcagac
1441 tcattctttgt tgcaaaccaa cattgctgtg cagctgatgg agaaaagcca
gaaggaatat
1501 gaaaaattag ctgccagttt aaatgaagca agacaagaac taagtgacaa
agtaagagaa
1561 ctttccagat ctgctggcaa aacatccctt gtggaggagg cagaaaagca
cgcgcggtcc
1621 ttacaagagc tggcaaagca gctggaagag atcaagagaa acgccagcgg
ggatgagctg
1681 gtgcgctgtg ctgtggatgc cgccaccgcc tacgagaaca tcctcaatgc
catcaaagcg
1741 gccgaggacg cagccaacag ggctgccagt gcatctgaat ctgccctcca
gacagtgata
1801 aaggaagatc tgccaagaaa agctaaaacc ctgagttcca acagtgataa
actgttaaat
1861 gaagccaaga tgacacaaaa gaagctaaag caagaagtca gtccagctct
caacaaccta
1921 cagcaaacc c tgaatattgt gacagttcag aaagaagtga tagacaccaa
tctcacaact
1981 ctccgagatg gtcttcatgg gatacagaga ggtgatattg atgctatgat
cagtagtgca
2041 aagagcatgg tcagaaaggc caacgacatc acagatgagg ttctggatgg
gctcaacccc
2101 atccagacag atgtggaaag aattaaggac acctatggga ggacacagaa
cgaagacttc

FIG. 2E (CONT)

2161 aaaaaggctc tgactgatgc agataactcg gtgaataagt taaccaacaa
 actacctgat
 2221 ctttggcgca agattgaaag tatcaaccaa cagctgttgc ccttgggaaa
 catctctgac
 2281 aacatggaca gaatacgaga actaattcag caggccagag atgctgccag
 taaggttgct
 2341 gtcccatga ggttcaatgg taaatctgga gtcgaagtcc gactgccaaa
 tgacctggaa
 2401 gatttgaaag gatatacatc tctgtccttg tttctccaaa ggcccaactc
 aagagaaaat
 2461 gggggactg agaatatgtt tgtgatgtac cttggaaata aagatgcctc
 ccgggactac
 2521 atcggcatgg cagttgtgga tggccagctc acctgtgtct acaacctggg
 ggaccgtgag
 2581 gctgaactcc aagtggacca gatcttgacc aagagtgaga ctaaggaggc
 agttatggat
 2641 cgggtgaaat ttcagagaat ttatcagttt gcaaggctta attacaccaa
 aggagccaca
 2701 tccagtaaac cagaaacacc cggagtctat gacatggatg gtagaaatag
 caatacactc
 2761 ctttaatttg atcctgaaaa tgttgtattt tatgttggag gttaccacc
 tgattttaaa
 2821 cttcccagtc gactaagttt ccctccatac aaaggttgta ttgaattaga
 tgacctcaat
 2881 gaaaatgttc tgagcttgta caacttcaaa aaaacattca atctcaacac
 aactgaagtg
 2941 gagccttgta gaaggaggaa ggaagagtca gacaaaaatt attttgaagg
 tacgggctat
 3001 gctcgagttc caactcaacc acatgctccc atcccaacct ttggacagac
 aattcagacc
 3061 accgtggata gaggcttgct gttctttgca gaaaacgggg atcgcttcat
 atctctaaat
 3121 atagaagatg gcaagctcat ggtgagatac aaactgaatt cagagctacc
 aaaagagaga
 3181 ggagttggag acgccataaa caacggcaga gaccattcga ttcagatcaa
 aattggaaaa
 3241 ctccaaaagc gtatgtggat aaatgtggac gttcaaaaca ctataattga
 tgggtgaagta
 3301 tttgatttca gcacatatta tctgggagga attccaattg caatcagggg
 aagatttaac
 3361 atttctacgc ctgctttccg aggctgcatg aaaaatttga agaaaaccag
 tgggtgtcgtt
 3421 agattgaatg atactgtggg agtaaccaa aagtgtcgg aagactggaa
 gcttgtgcga

FIG. 2E (CONT)

3481 tctgcctcat tctccagagg aggacaattg agtttctactg atttgggctt
 accacctact
 3541 gaccacctcc aggcctcatt tggatttcag acctttcaac ccagtggcat
 attattagat
 3601 catcagacat ggacaaggaa cctgcaggtc actctggaag atggttacat
 tgaattgagc
 3661 accagcgata gcggcagccc aattttttaa tctccacaga cgtatatgga
 tggtttactg
 3721 cattatgtat ctgtaataag cgacaactct ggactacggc ttctcatcga
 tgaccagctt
 3781 ctgagaaata gcaaaaggct aaaacacatt tcaagttccc ggcagtctct
 gcgtctgggc
 3841 gggagcaatt ttgaggggtg tattagcaat gtttttgtcc agaggttatc
 actgagtcct
 3901 gaagtcctag atttgaccag taactctctc aagagagatg tgtccctggg
 aggctgcagt
 3961 ttaaacaac caccttttct aatgttgctt aaaggttcta ccaggtttaa
 caagaccaag
 4021 acttttcgta tcaaccagct gttgcaggac acaccagtgg cctccccaag
 gagcgtgaag
 4081 gtgtggcaag atgcttgctc accacttccc aagaccagc ccaatcatgg
 agccctccag
 4141 tttggggaca ttcccaccag ccacttgcta ttcaagcttc ctcaggagct
 gctgaaaccc
 4201 aggtcacagt ttgctgtgga catgcagaca acatcctcca gaggactggt
 gtttcacacg
 4261 ggcactaaga actcctttat ggctctttat ctttcaaaag gacgtctggt
 ctttgcactg
 4321 gggacagatg ggaaaaaatt gaggatcaaa agcaaggaga aatgcaatga
 tgggaaatgg
 4381 cacacggtgg tgtttggcca tgatggggaa aaggggcgct tggttgtgga
 tggactgagg
 4441 gcccgggagg gaagtttgcc tggaaactcc accatcagca tcagagcgcc
 agtttacctg
 4501 ggatcacctc catcaggga accaaagagc ctccccacaa acagctttgt
 gggatgcctg
 4561 aagaactttc agctggattc aaaacccttg tataccctt cttcaagctt
 cggggtgtct
 4621 tcctgcttgg gtggtccttt ggagaaaggc atttatttct ctgaagaagg
 aggtcatgtc
 4681 gtcttggctc actctgtatt gttggggcca gaatttaagc ttgttttcag
 catccgccc
 4741 agaagtctca ctgggatcct aatacacatc ggaagtcagc ccgggaagca
 cttatgtgtt

FIG. 2E (CONT)

4801 tacctggagg caggaaaggt cacggcctct atggacagtg gggcaggtgg
gacctcaacg
4861 tcggtcacac caaagcagtc tctgtgtgat ggacagtggc actcgggtggc
agtcaccata
4921 aaacaacaca tcctgcacct ggaactggac acagacagta gctacacagc
tggacagatc
4981 cccttcccac ctgccagcac tcaagagcca ctacaccttg gaggtgctcc
agccaatttg
5041 acgacactga ggatccctgt gtggaaatca ttctttggct gtctgaggaa
tattcatgtc
5101 aatcacatcc ctgtccctgt cactgaagcc ttggaagtcc aggggcctgt
cagtctgaat
5161 ggttgtcctg accagtaacc caagcctatt tcacagcaag gaaattcacc
ttcaaaagca
5221 ctgattaccc aatgcacctc cctccccagc tcgagatcat tcttcactca
ggacacaaac
5281 cagacaggtt taatagcgaa tctaattttg aattctgacc atggataccc
atcacttttg
5341 cattcagtgc tacatgtgta ttttatataa aaatcccatt tcttgaagat
aaaaaaattg
5401 ttattcaaat tgttatgcac agaatgtttt tggtaatatt aatttccact
aaaaaattaa
5461 atgtctttta agaaacattc ttttccactt gttaaaaaaa ttaaataat
tttaaagcac
5521 tttaagaata tgaaactttc atatatgtta aaggattata atttatggaa
ttaaaaaatg
5581 cagtgtagtc cttaaaaaaa a

FIG. 2F

MPPAVRRSACSMGLWIFGAALGQCLGYSSQQQRPFLQPPGQS
QLQASYVEFRPSQGCSPGYRDHKGLYTGRVCPCNCNGHSNQCQDGSICVNCQHNTA
GEHCERCQEGYYGNAVHGSCRACPCPHTNSFATGCVVNGGDVRCSCKAGYTGTQCERC
APGYFGNPQKFGGSCQPCSCNSNGQLGSCHPLTGDCINQEPKDSSPAEECDDCDSCVM
TLLNDLATMGEQLRLVKSQLQGLSASAGLLEQMRHMETQAKDLRNQLLNYSIAISNHG
SKIEGLERELTDLNQEFETLQEKAQVNSRKAQTLNNNVNRATQSAKELDVKIKNVIRN
VHILLKQISGTDGEGNNVPSGDFSREWAEAQRMMRELNRNRFKGHLREAEADKRESQL

FIG. 2F (CONT)

LLNRIRTWQKTHQGENNGLANSIRDSLNEYEAKLSDLRARLQEAAAQAKQANGLNQEN
ERALGAIQRQVKEINSLQSDFTKYLTADSSLLQTNIALQLMEKSQKEYEKLAASLNE
ARQELSDKVRELSRSAGKTSLVEEAEKHARSLQELAKQLEEIKRNASGDELVRCAVDA
ATAYENILNAIKAAEDAANRAASASESALQTVIKEDLPRKAKTLSSNSDKLLNEAKMT
QKKLKQEVSPALNNLQQTLNIVTVQKEVIDTNLTTLRDGLHGIQRGDIDAMISSAKSM
VRKANDITDEVLDGLNPIQTDVERIKDTYGRQTQNEDFKKALTDADNSVNKLTKNLPDL
WRKIESINQQLPLGNISDNMDRIRELIQQARDAASKVAVPMRFNGKSGVEVRLPNDL
EDLKGYTSLSLFLQRPNSRENGGTENMFVMYLGNKDASRDYIGMAVVDGQLTCVYNLG
DREAELQVDQILTKSETKEAVMDRVKFQRIYQFARLNYTKGATSSKPETPGVYDMDGR
NSNTLLNLDPENNVFYVGGYPPDFKLPSRSLFPPYKGCIELDDLNNVLSLYNFKKTF
NLNTTEVEPCRRRKEESDKNYFEGTGYARVPTQPHAPIPTFGQTIQTTVDRGLLFFAE
NGDRFISLNIEDGKLMVRYKLNSELPKERGVGDAINNGRDHSIQIKIGKLQKRMWINV
DVQNTIIDGEVDFDFSTYYLGGIPIAIRERFNISTPAFRGCMKNLKKTSQGVRLNDTVG
VTKKCEDWKLVRASFSRGGQLSFTDLGLPPTDHLQASFGFQTFQPSGILLDHQTWT
RNLQVTLEDGYIELSTSDSGSPIFKSPQTYMDGLLHYVSVISDNSGLRLLIDDQLLRN
SKRLKHIISSSRQSLRLGGSNFEGCISNVFVQRLSLSPEVLDLTSNSLKRDVSLGGCSL
NKPPFLMLLKGSTRFNKTCTFRINQLLQDTPVASPRSVKQVWDACSPLPKTQANHGAL
QFGDIPTSHLLFKLPQELLKPRSQFAVDMQTTSSRGLVFHTGTKNFSMALYLSKGRLV
FALGTDGKKLRIKSKEKCNDGKWHTVVFGHDGEKGRLVVDGLRAREGSLPGNSTISIR
APVYLGSPPSGKPKSLPTNSFVGCLKNFQLDSKPLYTPSSSFVSSCLGGPLEKGIYF
SEEGGHVVLAHSVLLGPEFKLVFSIRPRSLTGILIHIGSQPGKHL CVYLEAGKVTASM
DSGAGGTSTSVTPKQSLCDGQWHSVAVTIKQHILHLELDTDSSYTAGQIPFPFPASTQE

FIG. 2F (CONT)

PLHLGGAPANLTTLRIPVWKSFFGCLRNIHVNHI PVPVTEALEVQGPVSLNGCPDQ

FIG. 2G

1 gtataagagg aagaacacaa aggtttgcag cagccaggca gaacaccaag
ggatcaagat
61 gccgcctaca gtgaggtggt cagcctggtg cacaggatgg ctgtggatct
ttggggcagc
121 tctgggccag tgcctggggt atggctcaga gcagcaaagg gtagcatttc
ttcagcatcc
181 agggcaaaac catctgcaag caagttatat ggagcttaga cccagccagg
gctgtcgccc
241 aggatactat cgagacatca aaagcttccc tgcgggaagg tctgttcct
gcaattgcaa
301 cggacattca aatagatgcc aagacggctc gggagtgtgc attaactgtc
agcacaacac
361 agctggggag cactgtgagc gttgcaagag gggttactat ggaagcgcca
tccatggatc
421 ctgcagggtt tgcccctgtc ctcacaccaa cagctttgcc actggctgtg
ctgtggatgg
481 aggagctgtg aggtgtgcct gcaaaccggg atacacagga gcacagtgtg
agaggtgtgc
541 accaggatat tttgggaacc cccagaaatt tggaggtagc tgccaaccat
gcaattgcaa
601 cagtaatggc cagtttggca cttgtgatcc cctaactgga gactgtgtaa
gccaagaacc
661 caaagatggc agccctgcag aagaatgtga tgactgtgac agctgtgtga
tgactctcct
721 aaatgacttg gtcccatgg gtgaggaact cgccctggtg aaatcaaaac
ttcaggggt
781 gagtgtgaac actggttctc tggaacagat ccggcatgtg gagatgcagg
ccaaggacct
841 gaggaaccag ctgcttggtc tccgttcgc catctccagt cacgggtccc
aaatggacgg
901 cctggaaaaa gaactcagtc atttgtacca ggaattcgaa actttgcaag
aaaaggcgca
961 ggtcaattcc agaaaagcac aaacattata taacaacatc gatacgacaa
tccaaaacgc
1021 caaagagttg gacatgaaga ttaaaaacat acttacgaat gtgcacattc
tcctgaagca
1081 gatcgctcgg ccaggtggag aaggaatgga cttgccggtg ggcgactggt
ccagggagtc

FIG. 2G (CONT)

1141 ggcggaagct cagcgcatgt tgcgggagct gcgaggccga gactttaaaa
 agcacctcca
 1201 agaagcagag gccagaaaa tggaagccca gctcttactg aaccgaatca
 ggacctggct
 1261 ggaatcccac caggtggaga acaatggact gctaaagaat attcgggatt
 cattaatatga
 1321 ttatgaagcc aaacttcagg acctgcgttc cgtgcttcag gaggcggcag
 cccagggaaa
 1381 gcaggctaca ggcctcaacc acgaaaatga gggggtccta ggagccatcc
 agagacaaat
 1441 gaaggaaatg gattccctga agaagtacct caccgagcac ctggccacag
 cagacgcttc
 1501 cctgctgcaa accaacagtc tactgcagcg gatggacacg agccagaagg
 agtatgaaag
 1561 cttagctgct gctttaaacg gagcaagaca ggaactgaat gaccaagtgc
 gggaactctc
 1621 cagatccgga ggcaaagcac ccctgggtggc tgaggccgag aagcacgctc
 agtctttaca
 1681 ggagctggca aagcagctgg aagagataaa gagaaacacc agtggggatg
 agtcgggtgcg
 1741 ctgtgtcgtg gacgctgcca ctgcctatga gagcatcctc aacgccatcc
 gagcagcaga
 1801 ggatgcagcc ggcaaggccg acagtgcctc agagtccgcc ttccagacag
 tgataaagga
 1861 agatcttccg agaagagcca aaaccctgag ttctgacagc gaggaactgt
 taaacgaggc
 1921 caagatgaca cggaaaaggc tacagcaaga aatcaatcca gctctcaaca
 gcctacagca
 1981 aaccctgaag actgtatcag ttcagaagga cctgctagat gccaatgtca
 ctgctgtccg
 2041 taatgacctt cgtgggatcc agagaggtga tattgacagt gtggtgagtg
 gagcgaagag
 2101 catggtcagg aaagccaatg ggataacgag cgaggctctg gacgggctca
 gccccatcca
 2161 gacggatttg ggaaggatta aggacagcta cgggagcaca cggcatgagg
 acttcaacaa
 2221 agctctgatt gacgccaata actcagtaaa gaaattaacc aagaagttgc
 ctgatctttt
 2281 tgtcaagatt gaaagcatca atcaacagtt gctgcccctg ggaaacatct
 ctgacaatgt
 2341 agaccgaatc cgagagctca ttacgcaggc cagagatgct gcgaacaagg
 ttgcaattcc
 2401 catgagggttc aatggtaaata ctggtgttga agtccgtctg ccaaatgacc
 tagaagactt

FIG. 2G (CONT)

2461 gaagggatac acgtctctgt ctttgttcct ccaaagacca gacttaagag
 agaatggagg
 2521 cactgaggac atgtttgtaa tgtaccttgg aaacaaggat gcctccaagg
 actacatcgg
 2581 catggcgggt gtagatggcc agctgacgtg tgtctacaac ctggggggacc
 gagaagctga
 2641 agttcagatc gatcagggtc tgacggagag tgagtctcag gaggcagtta
 tggaccgggt
 2701 gaagttccag agaatatatc aatttgccaa gcttaattac accaaagaag
 ccacgtccaa
 2761 taaacccaaa gctcccgcgg tctacgacct ggagggtggc agtagcaaca
 cgctccttaa
 2821 tttggatccc gaggacgctg tgttttatgt cggagggttac ccaccggatt
 ttgaacttcc
 2881 tagcagactg cggttccctc catacaaagg ctgtatcgaa ctagatgacc
 tcaatgaaaa
 2941 cgttctaagc ttgtacaatt tcaagacaac tttcaatctc aacaccacgg
 aggtggagcc
 3001 ttgtaggagg agaaaggaag agtcagacaa aaattacttt gaaggtacag
 gctatgctcg
 3061 catccctact caaccaaagt ctcccttccc aaacttcata cagaccatcc
 agactactgt
 3121 ggacagaggt ttactgttct tcgcagaaaa ccaggataac ttcatatctc
 tgaacataga
 3181 agatggcaat ctcatggtga gatacaaaact aaattcagag ccacccaaag
 agaaggggaat
 3241 tcgagacacc atcaacgatg ggaaagatca ttcgatctta atcacaattg
 gaaaactaca
 3301 aaaacgcatg tggataaatg tgaacgaacg cagtgtacga atcgaagggg
 aaatatttga
 3361 tttcagcaca tattatttgg gcggaattcc aattgcaatc agagaaaggt
 ttaacatctc
 3421 aacgcctgct ttccaaggct gcatgaagaa tctgaagaaa accagtgggg
 ttgtcaggtt
 3481 gaatgatact gtgggtgtaa ccaagaagtg ctcagaagac tggaagcttg
 tgcgaaccgc
 3541 ctcgttctcc agaggagggc agatgagctt taaaaacttg gacgtgccct
 cgactgaccg
 3601 cttccagctc tcctttgggt ttcagacctt tcaaccaggt ggcacactgc
 tcaatcatca
 3661 gacgcggaca agcagcctgc tggtcaccct ggaagatggg cacattgagt
 tgagcactag
 3721 ggacagcaac atcccaattt tcaagtctcc agggacctac atggacgggt
 tactgcatca

FIG. 2G (CONT)

3781 tgtatctgta ataagtgaca cctcaggtct ccgccttctc atcgatgacc
 aggtcctgag
 3841 aaggaaccag aggcttccta gcttctctaa cgcccagcag tcgctccgcc
 ttggaggagg
 3901 tcatttcgag ggttgatca gcaatgtttt agtccaaagg ttttcacaga
 gtccagaagt
 3961 cctggatctg gccagtaaat ctaccaagaa ggatgcatcc ctaggaggct
 gcagtttaaa
 4021 caagccacct tttcttatgt tgtttaaaag tcccaagaga ttaacaagg
 gccggatttt
 4081 caatgttaat cagctgatgc aagatgcacc tcaggccaca aggagcacag
 aggcttgga
 4141 agatgggagg tcctgcctac cacctctgaa caccaaggcc tctcacagag
 ccctgcagtt
 4201 tggagacagc cccaccagcc acttgctact caagcttccc caggaactgc
 tgaaacctag
 4261 gtcacagttt tctttagaca tacagacaac ttccccaaa ggactggtgt
 ttacgcagg
 4321 caccaaggac tccttcctgg ctctttatgt cgcagatggc cgtgttgtct
 ttgctttggg
 4381 ggcaggaggg aagaaactga gactcaggag caaggagaga taccatgacg
 ggaagtggca
 4441 cacggtggtg ttcggactaa atggaggaaa ggcacgctg gttgtggatg
 ggctaagggc
 4501 ccaggaaggc agtttgctg gaaattctac catcagcccc agagaacagg
 ttacctagg
 4561 gttgccgcta tcaagaaagc caaagagcct accccagcac agttttgtgg
 ggtgcctgag
 4621 agatttccag ttgaactcga aaccctgga ttctccttct gcgagggttg
 gggatatctc
 4681 ctgcttgggt ggctctttag agaaaggcat ttatttctcc caaggaggag
 gccatgtgat
 4741 cctagccaat tctgtgtcct tggggccaga gcttaagctc actttcagca
 ttcgcccacg
 4801 gagtctcact ggggtcttaa tacacgtcgg aagtcaatct ggacagcgct
 taagtgtgta
 4861 catggaggca ggaaaggcca caacctctgt gagcagtgat gcaggaggaa
 gtgtgacatc
 4921 aattacaccg aagcagtctc tgtgtgatgg acagtggcac tcggtggcag
 tctccattaa
 4981 acagcgcac ctagcatctag aactggatac agacagtagc tacacagtgc
 caccactttc
 5041 cttctcacca aacagcaccg gagggtcact gcacgtcgga ggtgtcccag
 acaaattgaa

FIG. 2G (CONT)

5101 aatgcttaca ctccctgtgt ggaactcatt ttttggtgt ctgaagaata
ttcaagtcaa
5161 ccatgtccct gtcccatca cagaagccac agaagtccaa ggttctgtca
gcctgaatgg
5221 ctgccctgac cactaacct acacagcaag attcaccttt ggag

FIG. 2H

MPPTVRWSAWCTGWLWIFGAALGQCLGYGSEQQRVAFLQHPPGQN
HLQASYMELRPSQGCRPGYYRDIKSFPAGRSVPCNCNGHSNRCQDGSVCINCQHNTA
GEHCERCKRGYYGSAIHGSCRVCPCPHTNSFATGCAVDGGAVRCACKPGYTGAQCERC
APGYFGNPQKFGGSCQPCNCNSNGQFGTCDPLTGDCVSQEPKDGSPAEECDSDSCVM
TLLNDLVPMGEELALVKSKLQGLSVNTGSLEQIRHVEMQAKDLRNQLLGFRSAISSHG
SQMDGLEKELSHLYQEFETLQEKAVNSRKAQTLNNDTTIQNAKELDMKIKNLTN
VHILLKQIARPGGEGMDLPVGDWSRESAEARMLRELGRDFKKHLQEAQKMEAQL
LLNRIRTWLESHQVENNGLLKNIRDSLNDYEAKLQDLRSVLQEAQAQKQATGLNHEN
EGVLGAIQRQMKEMDSLKKYLTEHLATADASLLQTNSSLQRMDSQKEYESLAAALNG
ARQELNDQVRELSRSGGKAPLVAEAEKHAQSLQELAKQLEEIKRNTSGDESVRCVDA
ATAYESILNAIRAAEDAAGKADSASESAFQTVIKEDLPRRAKTLSSDSEELLNEAKMT
RKRLQQEINPALNSLQQTLKTVSVQKDLLDANVTAVRNDLRGIQRGDIDSVVSGAKSM
VRKANGITSEVLDGLSPIQTDLGRIKDSYGSTRHEDFNKALIDANNSVKKLTKKLPDL
FVKIESINQQLPLGNI SDNVDRIRELITQARDAANKVAIPMRFGKSGVEVRLPNDL
EDLKGYTSLSLFLQRPDLRENGGTEDMFVMYLGNKDASKDYIGMAVVDGQLTCVYNLG
DREAQVQIDQVLTESESQEAVM DRVKFQRIYQFAKLNYTKEATSNKPKAPAVYDLEGG
SSNTLLNLDPEDAVFYVGGYPDFELPSRLRFPYKGCIELDDLNNVLSLYNFKTTF
NLNTTEVEPCRRRKEESDKNYFEGTGYARIPTQPNAPFPNFIQTIQTTVDRGLLFFAE

FIG. 2H (CONT)

NQDNFISLNIEDGNLMVRYKLNSEPPKEKGIRDTINDGKDHSILITIGKLQKRMWINV
NERSVRIEGEIFDFSTYYLGGIPIAIRERFNISTPAFQGCMMKNLKKTSQGVVRLNDTVG
VTKKCSWDKLVRTASFSRGGQMSFTNLDVPSTDRFQLSFGFQTFQPSGTLLNHQTRT
SSLLVTLEDGHIELSTRDSNIPFKSPGTMDGLLHHVSVISDTSGLRLLIDQVLRRL
NQRLPSFSNAQQSLRLGGGHFEGCISNVLVQRFSSQSPVLDLASKSTKKDASLGGCSL
NKPPFLMLFKSPKRFNKGRI FNVNQLMQDAPQATRSTEAWQDGRSCLPPLNTKASHRA
LQFGDSPTSHLLLKLPQELLKPRSQFSLDIQTTSKGLVIFYAGTKDSFLALYVADGRV
VFALGAGGKKLRLRSKERYHDGKWHTVVFGNLGGKARLVVDGLRAQEGSLPGNSTISP
REQVYLGLPLSRKPKSLPQHSFVGCLRDFQLNSKPLDSPSARFGVSPCLGGSLEKGIY
FSQGGGHVILANSVSLGPELKLTF SIRPRSLTGVLHVGSQSGQRLSVYMEAGKVTTT
VSSDAGGSVTSITPKQSLCDGQWHSVAVSIKQIRILHLELDTDSSYTVAPLSFSPNSTR
GSLHVGVPDKLKM LTLPVWNSFFGCLKNIQVNHVPVPITEATEVQGSVSLNGCPDH

FIG. 2I

1 atgtcagagg gcatttgctg ccgagctggc gcactgtgca agagtggaca
gcaagtttcc
61 actgtggtgg tggtagatcc accaaaccat gccagtggaa tgagaactga
atgcagccca
121 ccagagcacg tgcacacgtg cattaaggaa cctcagaatc agctcttcca
tgtggccttat
181 atcttaataca aatttgcaaa ctctccccgc cctgatcttt ggatcctgga
aagatctgta
241 gactttggaa gcacctactc accatggcag tattttgctc attctagaag
agattgtgta
301 gaacagtttg ggcaagaagc aaacatggca attaccaggc acgaccagat
gctctgtgta
361 acggagtatt cccgtatcgt gcctctggaa aatggcgaga ttgttgtatc
cttgataaat
421 ggctcgtccag gtgcaaaaaa gtttgctttc tctgacactc tgaggagatt
tactaaggca

FIG. 2I (CONT)

481 acaaacatcc gcttgcggtt tctgcgaacc aacaccctcc tcgggcatct
 tatttccaag
 541 gcagagcgag accccactgt cacgcgccgg tattattgca tggaagctga
 tgatgctctg
 601 ttctctgtcc tgcagtatta ttacagcata aaggatatca gtgttggtgg
 gcggtgtgtt
 661 tgcaacggcc atgcggaggc gtgcagtgtt gacaaccctg aaaagcagtt
 ccgatgcgaa
 721 tgccagcacc atacctgtgg agacacgtgt aaccgctgct gtgcaggtta
 caatcagagg
 781 cgctggcagc ctgctggtca ggagcagcac aatgagtgtg aagcctgcaa
 ctgccatggg
 841 catgctgtgg actgctacta tgaccagac gtggagcacc agcaggcgag
 cttgaacagc
 901 aaaggcgtct acgcagggtg aggggtctgc atcaactgtc agcacaacac
 tgcaggcgtg
 961 aactgtgaaa agtgtgcgaa gggttacttc cggcccatg gagttccggt
 ggatgcactg
 1021 catggatgca tcccttgagc ctgtgacca gaacgcgcag atgactgtga
 ccagggtca
 1081 ggccactgcc attgtaagcc aaatttctcc ggagactact gtgagacgtg
 tgcagatggg
 1141 tactataatt ttccattttg cttgagaatt ccagtctttc ccaactacac
 tccaagtcca
 1201 gaagatccag tggctggcaa tataaaaggc aaggatccag ggactctaga
 cccaccagtc
 1261 atagcaaagt gggcatatct tggagcttca agactagagc aaggagccac
 aggccagggc
 1321 agccctgctg agaggggtcac ccacaccaac tcatggctga gttcctcaat
 gcctatgctc
 1381 caggttaggg ctgccatcca tgaggctaag tgttactctc tgtgtttctg
 tatgtatgtt
 1441 gagcacagtg ggactgtacc acctgctctg gggtcagggtt atacagggga
 ctctgagcct
 1501 aaaacaggaa cccaggcaaa aagggggtgt gactgtaact tggaaggtgt
 tctcccagag
 1561 atatgtgacg atcgtggcag gtgcctgtgc cgccctgggg ttgaggggtcc
 ccagtgtgac
 1621 tcttgccgct cgggctccta ttcatttccc atatgccaag cttgccagtg
 ttcgacgatt
 1681 ggatcctatc cagtgccttg tgaccggggg aatggccagt gtgactgcct
 gcctggaatt
 1741 accgggaggg agtgtgacag gtgtctctcg ggagcctatg actttccata
 ctgccaaggt

FIG. 2I (CONT)

1801 aaggaagccg gcagcatggt ggaggctcgg tcctcatctg agtgggtgca
 gctgacctct
 1861 tggagaagcc tgggttattg tcagtgaag cagcatgttg caagtcctac
 atgtagtgct
 1921 tgcaaaccat tatattggaa tctggccaaa gaaaaccccc gtggatgctc
 agagtgccag
 1981 tgccatgaag cagggaacatt gagtgggaatt ggagagtgtg ggcaggagga
 cggtgactgt
 2041 agctgcaaag cccatgtaac tggatgatgcc tgcgacacct gtgaagatgg
 gtttttctct
 2101 ttggagaaga gcaattactt tggctgtcaa ggggtgtcagt gtgacattgg
 tggagcactc
 2161 accaccatgt gtagtgggccc ctcgggagta tgccagtgca gagagcacgt
 ggaggggaaa
 2221 cagtgccaga ggcctgaaaa taactactac ttcccggatt tgcaccacat
 gaagtatgag
 2281 gtcgaagatg gcactggacc taatggaaga aacctgcggt ttggatttga
 tcccctggta
 2341 ttccctgagt ttagctggag aggatatgct ccaatgacct cagtccaggt
 atatatgagt
 2401 gagtgtgtgt gtcctctaca ctgcatgtta ttttggggta cttttcagaa
 tgaagtaagg
 2461 gtgagattgt ctgtgaggca gtccagcctc tccttggtcc gcatcggtct
 gagatacatc
 2521 agtcctggaa cggaagccat atccggccga atcactcttt actcatcgca
 gggagattcg
 2581 gatgctttgc aaagcagaaa aatcaccttt cccccagta aagagccagc
 ctttgtcaca
 2641 gtccctggga atggctttgc aggcccatc tccatcacac ctgggacgtg
 gattgcttgc
 2701 atccaggtgg aaggagtcct tctggactac ctgggtgctgc ttcccaggga
 ctactatgaa
 2761 gcattcaccc tgcaagtgcc agtcacagag ccatgtgccc acacaggatc
 tcccaggac
 2821 aactgtttgc tttaccagca tttaccactg actgcattct cctgtaccct
 ggcttgtgag
 2881 gccagacact tcctgctgga tggagagctg agacccttgg caatgaggca
 gccacacccc
 2941 acacacccag ccatggtgga cctcagcggg agagaggtag aactgcagct
 tcgtctgcgg
 3001 gtcccacagg ttggccacta cgtggctctg ctggagtatg ccacggaggt
 ggagcagctt
 3061 tttgtggtgg acgtgaatct gaagagctca gggctctgct tggcaggcca
 ggtgaacata

FIG. 2I (CONT)

3121 tacagctgca agtacagcat cccgtgcagg agtgtggtga ttgacagcct
 gagtcgcacg
 3181 gctgtacatg agctgttggc agatgcagac attcagctca aggcgcacat
 ggcccatttc
 3241 cttttgtatc acatttgtat tataccagct gaagaattct caactgaata
 tttgagacct
 3301 caagtccact gcattgccag ctacaggcag catgctaata caagtgcttc
 ctgtgtctcc
 3361 ctggcccatg aaactcctcc aacagcctca attttggatg ctacaagtag
 gggccttttc
 3421 tctgccctac ctcatgagcc ttcctctcct gcagatggag ttactctgaa
 ggcaccacag
 3481 agtcaagtga ccctgaaagg actcatacca cacctgggcc gacacgtctt
 tgtcatccat
 3541 ttttatcaag cagagcaccc agggtttccc actgagggtga ttgtgaatgg
 aggaagacag
 3601 tggtcagggt ccttccttgc ctcttctgt cccacttac ttggctgccg
 ggaccagggt
 3661 atctctgatg gccaagtgga gtttgacatc tctgaagcag aggtagctgt
 gacagtgaag
 3721 attccagatg gaaagtcctt aacattggtc cgggttctag tggtagctgc
 agagaattac
 3781 gactacaaaa ttcttcacaa aacaacagtg gacaagtcct ccgagttcat
 cagcagttgt
 3841 ggaggagaca gcttttatat tgatccccag gcagcctctg gattctgtaa
 gaattctgca
 3901 aggtccctgg tagcctttta ccataacggt gccataccct gtgagtgcga
 ccctgctggg
 3961 actgccggcc accactgtag tcttgagggt gggcagtgcc cttgccggcc
 caatgtcatc
 4021 gggaggcagt gcagccgctg tgcgacaggc tactatggat tcccatactg
 caagccttgt
 4081 aattgtggca gacgcctttg tgaagagggt acaggaagt gtctctgccc
 accccacaca
 4141 gtcaggcctc agtgtgaggt ctgtgagatg aattccttca actttcaccc
 tgtggctggc
 4201 tgtgacgtct gcaactgctc caggaagggc accattgagg cggccgtctc
 tgagtgtgac
 4261 agggacagcg ggcagtgcag gtgcaagcct agagtcacag ggcagcagtg
 tgacaagtgt
 4321 gctcctggct tctaccagtt ccctgagtgt gtcccctgca gctgtaacag
 agatgggact
 4381 gagcccagcg tatgtgaccc agagactggg gcttgcattgt gcaaggaaaa
 tgtagagggc

FIG. 2I (CONT)

4441 ccccaatgtc aactgtgtcg agaaggatca ttctacctgg acccaacaaa
 cccaaagggt
 4501 tgtaccaagt gcttctgttt tggagtgaat actgactgtc agagttcgca
 taagcaacga
 4561 gctaagtttg tagacatgat gggctggcgt ctggagacag cagatggagt
 tgatgtccct
 4621 gtgtccttca accctggcag caacagcatg gtggcagatc tgcaggagct
 gccaccctca
 4681 gttcacagtg catcctgggt ggcacctcca tcctacctag gtgataaggt
 atcatcgtac
 4741 ggcggctacc tcacctacca cgccaagtcc tttggcttac ctggagatat
 ggttcttctg
 4801 ggaaagcagc cagatgtgca gctcactggg caacacatgt ccctcatcca
 taaggaaccc
 4861 agcgaccac gccagacag gctgcatcac ggaagagtgc aagtgattga
 gggaaacttc
 4921 agacacgaag gcagcagtgc cccagtgtcc cgggaggagc tgatgactgt
 gctgtccaga
 4981 ctggaaagac tccacatccg gggcctccat ttcaccgaga cacagcggct
 caccttgggt
 5041 gaggtagggc tggaggaggc ctctgacacg ggaagcggac ccagggtca
 tcttgtggag
 5101 atgtgtgcct gccccctga ctacacaggt gactcatgcc agggttgtcg
 ccctggatac
 5161 tattgggaca acaaaagctt acctgtagga aggtgtgttc cctgcaattg
 caacggacat
 5221 tcaaatagat gccaggatgg ctccgggata tgcattaact gtcagcacia
 cacagctggg
 5281 gagcactgtg agcgttgcc agcagggtcac tatggaaatg ccatccacgg
 atcttgtagg
 5341 gtctgcccct gccctcatac caacagtttt gccaccggct gtgctgtgga
 tgggtggagct
 5401 gtgaggtgtg cctgcaaacc cggatacaca ggaacacagt gtgagaggtg
 tgcaccagga
 5461 tattttggga acccccagaa atttgagggt agctgccagc catgcaattg
 taacagcaat
 5521 ggccagttag gtccttgcca cccctaact ggagactgtg taaaccaaga
 acccaaagat
 5581 ggcagccctg .cagaagaatg tgatgactgc gacagctgtg tgatgacgct
 cttaaagtac
 5641 ttggcctcca tgggtgagga actccgctg gtgaagtcaa agctgcaggg
 gctgagtggtg
 5701 agcacgggtg ctctggaaca gatccggcac atggagacgc aggccaagga
 cctgaggaac

FIG. 2I (CONT)

5761 cagctgcttg gcttccgttc tgccacctca agtcatgggt ccaaaatgga
 tgacctggaa
 5821 aaagagctga gtcatttgaa ccgggaattt gaaactctgc aagaaaaggc
 acaggtcaat
 5881 tccagaaaag cacaacatt atataacaac attgatcaga caatccaaag
 tgccaaagaa
 5941 ctggacatga agattaataa catcggttcag aatgtgcaca ttctcctgaa
 gcagatggcg
 6001 aggccagggtg gagaaggcac ggacttgcca gtgggtgact ggtccaggga
 gctggccgaa
 6061 gctcaacgca tgatgcgaga cctgccaagc cgagacttta aaaagcacct
 ccaagaagca
 6121 gaggccgaga aaatggaagc ccagctctta ctgcaccgga tcaggacctg
 gctggaatcc
 6181 caccagggtgg agaacaacgg actgctaaag aatattcggg actccttaaa
 tgattatgaa
 6241 gacaaacttc aggacctacg ttccatcctc caggaggcag ctgcccaggc
 aaagcaggcc
 6301 actggcatca accatgaaaa tgaggggggtt ctcgagacca tccagagaca
 aatgaaagaa
 6361 atggattccc tgaagaatga cttaccaag tacctggcca cagccgactc
 ttccctgctg
 6421 cagaccaaca atctactgca gcagatggac aaaagccaga aggaatatga
 aagcttagct
 6481 gctgctttaa atggagcaag acaggaactg agtgacagag tgcgagaact
 gtccagatcg
 6541 ggtggcaaag caccgctggt ggtggaggca gagaagcatg cacagtcttt
 acaggagctg
 6601 gcaaagcagc tggaagagat aaagagaaac accagcgggg atgagctggt
 gcgttgctg
 6661 gtggatgctg ccacggccta tgagaacatc ctcaatgcca tcagagcagc
 agaggatgca
 6721 gccagcaagg ccaccagtgc ctccaagtct gccttccaaa cagtgataaa
 ggaagacctt
 6781 ccaaaaagag ctaagaccct gagttctgac agcgaggaac tggttaaata
 agccaagatg
 6841 acacagaaaa ggctacagca agtcagtcca gctctcaaca gcctacaaca
 aaccctgaag
 6901 actgtatcag ttcagaagga cctgctagat gccaacctca ctggtgcccg
 tgatgatctt
 6961 catgggatac agagagggtga tatcgacagt gtgggtgatcg gtgcaaagag
 catggtcagg
 7021 gaagccaacg gaataacaag cgaggctctg gacgggctca accccatcca
 gacagatttg

FIG. 2I (CONT)

7081 ggaaggatta aggacagcta tgagagcgca cggcgtgaag acttcagcaa
ggctctggtc
7141 gatgccaata actcagtaaa gaaattaacc aggaagttgc ctgatctttt
tatcaagatt
7201 gaaagtatca accaacagtt gctgcccctg gggaacatct ctgacaatgt
ggaccgaatc
7261 cgagaactca ttcagcaggc cagagatgct gcaaacaagg tgggtattcc
catttggtc
7321 tag

FIG. 2J

MSEGICCRAGALCKSGQQVSTVVVVDPPNHASGMRTESPPPEHV
HTCIKEPQNQLFHVAYILIKFANSRPDLWILERSVDFGSTYSPWQYFAHSRRDCVEQ
FGQEANMAITQDDQMLCVTEYSRIVPLENGEIVVSLINGRPGAKKFAFSDTLREFTKA
TNIRLRFLRTNTLLGHLISKAERDPTVTRRYCMEADDALFSVLQYYYSIKDISVGGR
CVCNGHAEACSDADNPEKQFRCECQHHTCGDTCNRCCAGYNQRRWQPAGQEQHNECEAC
NCHGHAVIDCYDPDVEHQQASLNSKGVYAGGGVCINCQHNTAGVNCEKCAKGYFRPHG
VPVDALHGCIPCSCDPERADDCDQSGHCHCKPNFSGDYCETCADGYYNFPFCLRIPV
FPNYTPSPEDPVAGNIKGKDPGTLDPPIANGAYLGASRLEQGATGQGSPAERVTHTN
SWLSSSMPLQVRAAIHEAKCYSLCFCMYVEHSGTVPPALGSGYTGDSEPKTGTQAKR
GCDCNLEGVLPEICDDRGRCLCRPGVEGPQCDSRSGSYSFPICQACQCSTIGSYVPV
CDPGNGQCDCLPGITGRQCDRCLSGAYDFPYCQKEAGSMLEARSSSEWVQLTSWRSL
GYCQCKQHVASPTCSVCKPLYWNLAKENPRGCSECQCHEAGTLSGIGECGQEDGDCSC
KAHVTGDACDTCEDGFFSLEKSNYFGCQGCQCDIGGALTTMCSGPSGVCQCREHVEGK
QCQRPENNYFPPDLHMKYEVEDGTGPNGRNLRFGFDPLVFPEFSWRGYAPMTSVQVY
MSECVCPLHCMLFWGTFQNEVRVRLSVRQSSLSLFRIVLRYISPGTEAISGRITLYSS
QGDSDALQSRKITFPPSKEPAFVTVPGNGFAGPFSITPGTWIACIQVEGVLLDYLVL

FIG. 2J (CONT)

PRDYIEAFTLQVPVTEPCAHTGSPQDNCLLYQHLPLTAFSCTLACEARHFLLDGELRP
LAMRQPTPTHAMVDLSGREVELQLRLRVPQVGHYVVLLEYATEVEQLFVVDVNLKSS
GSALAGQVNIYSCKYSIPCRSVVIDSLSR TAVHELLADADIQLKAHMAHFLLYHICII
PAEEFSTEYLRPQVHCIASYRQHANSASCVSLAHETPPTASILDATSRGLFSALPHE
PSSPADGVTLKAPQSQVTLKGLI PHLGRHV FVIHFYQAEHPGFPT EIVNGGRQWSGS
FLASFCPHLLGCRDQVISDGQVEFDISEAEVAVTVKIPDGKSLTLVRVLV VPAENYDY
QILHKTTVDKSSEFISSCGGDSFYIDPQAASGFCKNSARSLVAFYHNGAIPCECDPAG
TAGHHCSPEGGQCPCRPNVIGRQCSRCATGYYGFPYCKPCNCGRRLCEEVTGKCLCPP
HTVRPQCEVCEMNSFNHFPVAGCDVCNCSRKGTIEAAVSECDRDSGQCRCKPRVTGQQ
CDKCAPGFYQFPECVPCSCNRDGT EPSVCDPETGACMCKENVEGPQCQLCREGSFYLD
PTNPKGCTKCFCFGVNTDCQSSHQRAKFVDMMGWRLETADGVDVPVSFNPGSNSMVA
DLQELPPSVHSASWAPPSYLGDKVSSYGGYLTYHAKSFGLPGDMVLLGKQPDVQLTG
QHMSLIHKEPSDPRPDRLLHHGRVQVIEGNFRHEGSSAPVSREELMTVLSRLERLHIRG
LHFTETQRLTLGEVGL EEASDTGSGPRAHLVEMCACPPDYTG DSCQGCRPGYYWDNKS
LPVGRVCVPCNCGHSNRCQDGS GICINCQHNTAGEHCERCQAGHYGN AIHGSCRVCPC
PHTNSFATGCAVDGGAVRCACKPGYTGTQCERCAPGYFGNPQKFGGSCQPCNCNSNGQ
LGPCDPLTGDCVNQEPKDGSPAEECD DCDSCVM TLLNDLASMGEELRLVKSKLQGLSV
STGALEQIRHMETQAKDLRNQLLGFRSATSSHGSKMDDLEKELSHLNREFETLQEKAQ
VNSRKAQTLYNNIDQTIQSAKELDMKIKNIVQNVHILLKQMARPGGEGTDLPVGDWSR
ELAEAQRMMRDLRSRDFKKHLQEAEAEKMEAQ LLLHRI RTWLESHQVENNGLLKNIRD
SLNDYEDKLQDLRSILQEAAAQAKQATGINHENEGVLGAIQRQMKEMDSLKNDFTKYL
ATADSSLLQTNNLLQQMDKSQKEYESLAAALNGARQELSDRVRELSRSGGKAPLVVEA

FIG. 2J (CONT)

EKHAQSLQELAKQLEEIKRNTSGDELVRCAVDAATAYENILNAIRAAEDAASKATSAS
KSAFQTVIKEDLPKRAKTLSSDSEELLNEAKMTQKRLQQVSPALNSLQQTLKTVSVQK
DLLDANLTVARDDLHGIQRGDIDSVVIGAKSMVREANGITSEVLDGLNPIQTDLGRIK
DSYESARREDFSKALVDANNSVKKLTRKLPDLFIKIESINQQLPLGNISDNVDRIRE
LIQQARDAANKVGIPWL"

CSPLPKTQANH GALQFGDIPTSHLLFKLPQELLKPRSQFAVDMQTTSSRGLVFHTGTKN SFMAL
 YLSKGRLVFALGTDGKKLR IKSKEKCNDGKWH TVVFGHDGEKGRLVVDGLRAREGSLPGNSTIS
 IRAPVYLGSPPSGKPKSLPTNSFVGCLKNFQLDSKPLYTPSSSFGVSSCLGGPLEKGIYFSEEG
 GHVLAHSVLLGPEFKLVFSIRPRSLTGILIHIGSQPGKHL CVYLEAGKVTASMDSGAGGTSTS
 VTPKQSLCDGQWHSVAVTIKQHILHLELDTDSSYTAGQIPFP PASTQEPLHLGGAPANLTTLRI
 PVWKSFFGCLRNIHVNHIPVPVTEALEVQGPVSLNGCPDQ

FIG. 3A

t gctcaccact tcccaagacc caggccaatc atggagccct ccagtttggg
 gacattccca ccagccactt gctattcaag cttcctcagg agctgctgaa
 acccaggtca cagtttgctg tggacatgca gacaacatcc tccagaggac
 tgggtgtttca cacgggcact aagaactcct ttatggctct ttatctttca
 aaaggacgtc tggctctttgc actggggaca gatgggaaaa aattgaggat
 caaaagcaag gagaaatgca atgatgggaa atggcacacg gtggtgtttg
 gccatgatgg ggaaggggg cgcttggttg tggatggact gagggcccgg
 gaggaagtt tgcctggaaa ctccaccatc agcatcagag cgccagttta
 cctgggatca cctccatcag ggaaaccaa gagcctcccc acaaacagct
 ttgtgggatg cctgaagaac tttcagctgg attcaaaacc cttgtatacc
 ccttcttcaa gcttcgggggt gtcttcctgc ttgggtggtc ctttgagaa
 aggcatttat ttctctgaag aaggaggtca tgctgtcttg gctcactctg
 tattgttggg gccagaattt aagcttgttt tcagcatccg cccaagaagt
 ctactggga tcctaataca catcggaagt cagcccggga agcacttatg
 tgtttacctg gaggcaggaa aggtcacggc ctctatggac agtggggcag
 gtgggacctc aacgtcggtc acaccaaagc agtctctgtg tgatggacag
 tggcactcgg tggcagtcac cataaaacaa cacatcctgc acctggaact
 ggacacagac agtagctaca cagctggaca gatccccttc ccacctgcca
 gcactcaaga gccactacac ctgggaggtg ctccagccaa tttgacgaca
 ctgaggatcc ctgtgtggaa atcattcttt ggctgtctga ggaatattca
 tgtcaatcac atccctgtcc ctgtcactga agccttgga gtccaggggc
 ctgtcagtct gaatggttgt cctgaccagt aaccaagcc tatttcacag
 caaggaaatt caccttcaaa agcactgatt acccaatgca cctccctccc
 cagctcgaga tcattcttca attaggacac aaaccagaca ggtttaatag
 cgaatcta at tttgaattct gaccatggat acccatcact ttggcattca
 gtgctacatg tgtattttat ataaaaatcc catttcttga agataaaaaa
 attgttattc aaattgttat gcacagaatg tttttggtaa tattaatttc
 cactaaaaaa ttaaattgtct

FIG. 3B

CLGGPLEKGIYFSEEGGHVLAHSVLLGPEFKLVFSIRPRSLTGILIHIGSQPGKHL CVYLEAG
 KVTASMDSGAGGTSTSVTPKQSLCDGQWHSVAVTIKQHILHLELDTDSSYTAGQIPFP PASTQE
 PLHLGGAPANLTTLRI PVWKSFFGCLRNIHVNHIPVPVTEALEVQGPVSLNGCPDQ

FIG. 3C

tgc ttgggtggtc ctttggagaa aggcatttat ttctctgaag aaggaggtca
tgtcgtcttg gctcactctg tattgttggg gccagaattt aagcttgttt
tcagcatccg cccaagaagt ctactggga tcctaataca catcggaagt
cagcccggga agcacttatg tgtttacctg gaggcaggaa aggtcacggc
ctctatggac agtggggcag gtgggacctc aacgtcggtc acaccaaagc
agtctctgtg tgatggacag tggcactcgg tggcagtcac cataaaacaa
cacatcctgc acctggaact ggacacagac agtagctaca cagctggaca
gatccccctt ccacctgcca gcactcaaga gccactacac cttggagggtg
ctccagccaa tttgacgaca ctgaggatcc ctgtgtggaa atcattcttt
ggctgtctga ggaatattca tgtcaatcac atccctgtcc ctgtcactga
agccttggaa gtccaggggc ctgtcagtct gaatggttgt cctgaccagt
aacccaagcc tatttcacag caaggaaatt caccttcaaa agcactgatt
accaatgca cctccctccc cagctcgaga tcattcttca attaggacac
aaaccagaca ggtttaatag cgaatctaattttgaattct gaccatggat
acccatcact ttggcattca gtgctacatg tgtattttat ataaaaatcc
catttcttga agataaaaaa attgttattc aaattgttat gcacagaatg
tttttggtaa tattaatttc cactaaaaaa ttaaattgtct

FIG. 3D

PLPKTQANHGA

FIG. 3E

cact tcccaagacc caggccaatc atggagc

FIG. 3F

SHLLFKLPQELLKPRS

FIG. 3G

gccactt gctattcaag cttcctcagg agctgctgaa acccaggtca

FIG. 3H

TSSRGLVFHTGTKNSFMALYLSKGRLVFALGTDGKKLRIKSKEKCNDGKWHTVVFGHDGEKGRL
VVDGLRAREGSLPGNSTISIRAPVYLGSPPSGKPKSLPTNSFVGCLKNFQLDSKPLYTPSSSFG
VSS

FIG. 3I

gacaacatcc tccagaggac tgggtgtttca cacggggcact aagaactcct
 ttatggctct ttatctttca aaaggacgtc tgggtctttgc actggggaca
 gatgggaaaa aattgaggat caaaagcaag gagaaatgca atgatgggaa
 atggcacacg gtgggtgtttg gccatgatgg ggaaaagggg cgcttggttg
 tggatggact gagggcccgg gaggggaagt tgcctggaaa ctccaccatc
 agcatcagag cgccagttta cctgggatca cctccatcag ggaaacaaaa
 gagcctcccc acaaacagct ttgtgggatg cctgaagaac tttcagctgg
 attcaaaacc cttgtatacc cttcttcaa gcttcggggg gtcttctt

FIG. 3J

TSSRGLVFHTGTKNSFMALYLSKGRLVFALGTDGKKLRIKSKEKCNDGKWHTVVFGHDGEKGRL
 VVDGLRAREGSLPGNSTISIRAPVYLGSPPSGKPKSLPTNSFVGCLKNFQLDSKPLYTPSSSFG
 VSSCLGGPLEKGIYFSEEGGHVVLAHSVLLGPEFKLVFSIRPRSLTGILIHIGSQPGKHL CVYL
 EAGKVTASMDSGAGGTSTSVTPKQSLCDGQWHSVAVTIKQHILHLELDTDSSYTAGQIPFPAS
 TQEPLHLGGAPANLTTLRIPVWKSFFGCLRNHVNHIPVPVTEALEVQGPVSLNGCPDQ

FIG. 3K

catcc tccagaggac tgggtgtttca cacggggcact aagaactcct ttatggctct
 ttatctttca aaaggacgtc tgggtctttgc actggggaca gatgggaaaa
 aattgaggat caaaagcaag gagaaatgca atgatgggaa atggcacacg
 gtgggtgtttg gccatgatgg ggaaaagggg cgcttggttg tggatggact
 gagggcccgg gaggggaagt tgcctggaaa ctccaccatc agcatcagag
 cgccagttta cctgggatca cctccatcag ggaaacaaaa gagcctcccc
 acaaacagct ttgtgggatg cctgaagaac tttcagctgg attcaaaacc
 cttgtatacc cttcttcaa gcttcggggg gtcttcttgc ttgggtgggc
 ctttgaggaa aggcatttat ttctctgaag aaggagggtca tgcctgtctg
 gctcactctg tattgttggg gccagaattt aagcttggtt tcagcatccg
 cccaagaagt ctactggga tcctaataca catcggaagt cagcccggga
 agcacttatg tgtttacctg gaggcaggaa aggtcacggc ctctatggac
 agtggggcag gtgggacctc aacgtcggtc acaccaaagc agtctctgtg
 tgatggacag tggcactcgg tggcagtcac cataaaacaa cacatcctgc
 acctggaact ggacacagac agtagctaca cagctggaca gatccccttc
 ccacctgcca gcactcaaga gccactacac cttggagggtg ctccagccaa
 tttgacgaca ctgaggatcc ctgtgtggaa atcattcttt ggctgtctga
 ggaatattca tgtcaatcac atccctgtcc ctgtcactga agccttgga
 gtccaggggc ctgtcagtct gaatgggtgt

FIG. 3L

FKLVFSIRPRSLTGILIHIGSQPGKHL CVYLEAGKVTASMDSGAGGTSTSVTPKQSLCDGQWHS
 VAVTIKQHILHLELDTDSSYTAGQIPFPASTQEPLHLGGAPANLTTLRIPVWKSFFGCLRNH
 VNHIPVPVTEALEVQGPVSLNGCPDQ

FIG. 3M

tt aagcttggtt tcagcatccg cccaagaagt ctactggga tcctaataca
catcggaagt cagcccgga agcacttatg tgtttacctg gaggcaggaa
aggtcacggc ctctatggac agtggggcag gtgggacctc aacgtcggtc
acaccaaagc agtctctgtg tgatggacag tggcactcgg tggcagtcac
cataaaacaa cacatcctgc acctggaact ggacacagac agtagctaca
cagctggaca gatccccctc ccacctgcca gcactcaaga gccactacac
cttggagggtg ctccagccaa ttgacgaca ctgaggatcc ctgtgtggaa
atcattcttt ggctgtctga ggaatattca tgtcaatcac atccctgtcc
ctgtcactga agccttgga gtccaggggc ctgtcagtct gaatggttgt
cctgaccagt

FIG. 3N

FIG. 4

human
skin



human
SCC



mammalian Tollid

laminin 5

FIG. 5

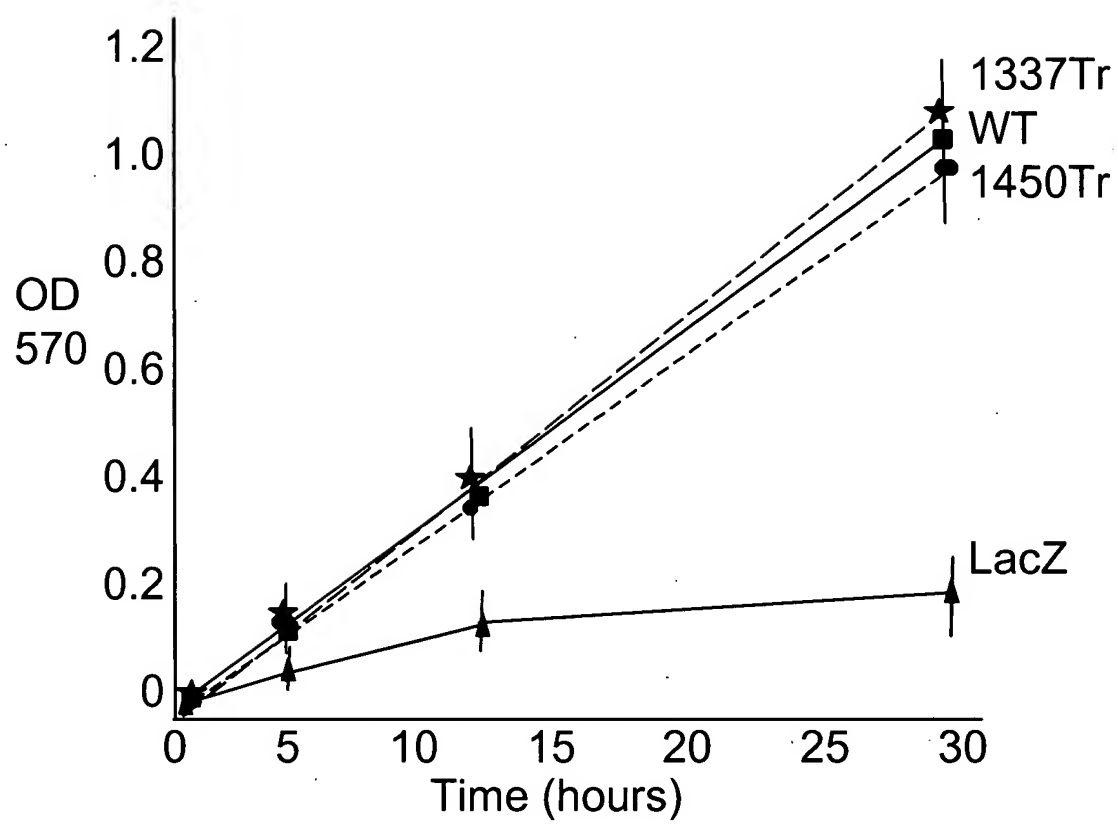


FIG. 6

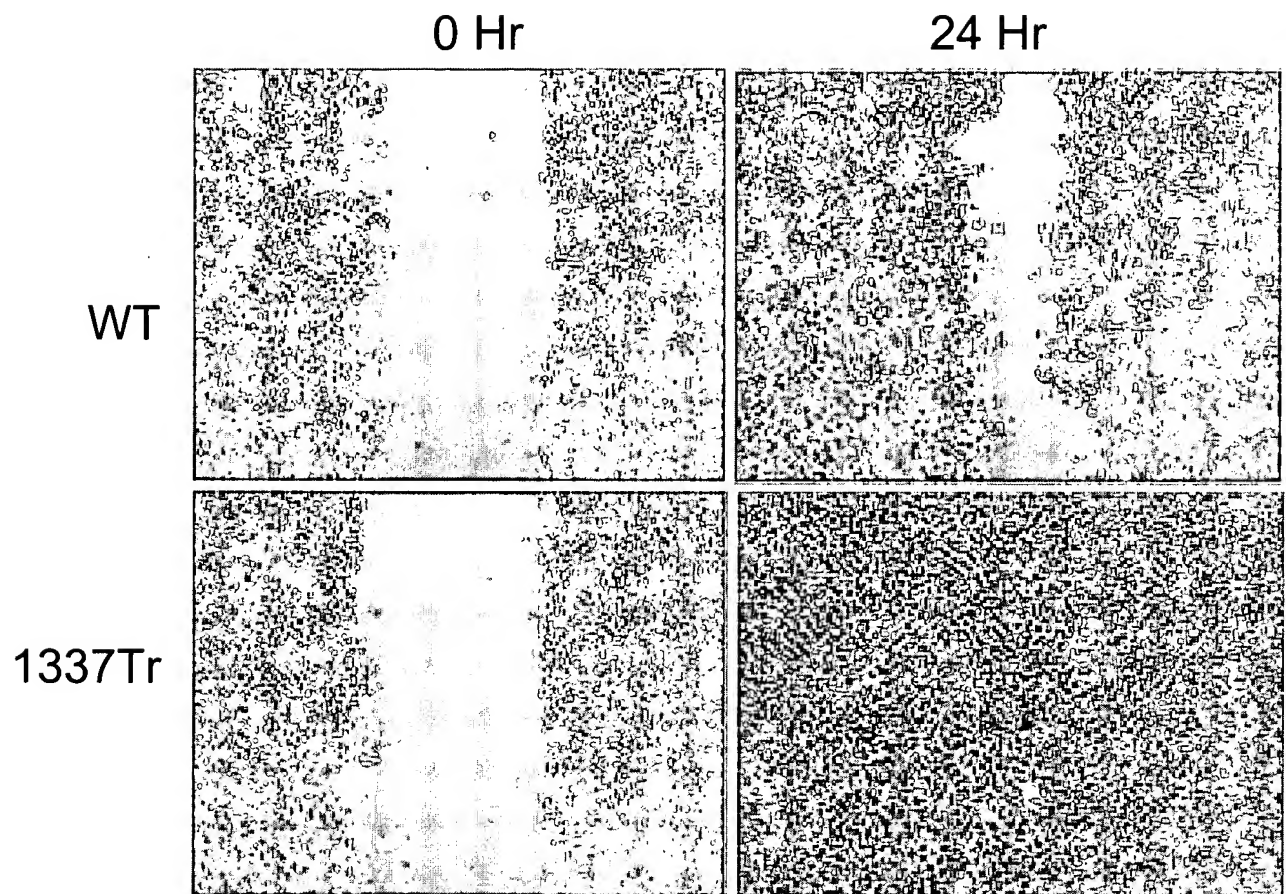


FIG. 7

